

Access DB# 59156**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: Catherine Seiler Examiner #: 77029 Date: 1/23/02
Art Unit: 3763 Phone Number 308-4846 Serial Number: 09/475,708
Mail Box and Bldg/Room Location: 3E116 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Conduit System for Isolation of Fluids in Biological TissuesInventors (please provide full names): Pinkie RayEarliest Priority Filing Date: 12/20/1999

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

A catheter system which includes two catheters with balloons (occluding)
~~One~~ ^{First} catheter is a fluid delivery catheter (any fluid, or drug)
Second catheter is a fluid collection catheter to be placed
in the coronary sinus *

* the placement of a catheter (w/a balloon) specifically for fluid collection, withdrawal, or return into the coronary sinus is what I am looking for.

biomaterials

not - performed
not - intrapapillary
not - human

BEST AVAILABLE COPY

STAFF USE ONLY

Searcher: JEANNE HARRIGAN
Searcher Phone #: 305-5934
Searcher Location: 0P2-2008
Date Searcher Picked Up: 1-29
Date Completed: 1-30
Searcher Prep & Review Time: 182
Clerical Prep Time: _____
Online Time: 78

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) _____
Bibliographic ☒ _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN _____
Dialog ☒ _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

January 30, 2002

TO: Catherine Serke, Art Unit 3763
CP2, Room 3B30

FROM: Jeanne Horrigan, EIC-3700 *JS*

SUBJECT: Search Results for Serial #09/475768

Attached are the search results for the "Conduit System for Isolation of Fluids in Biological Tissues," including results of an inventor search in foreign patent databases, and prior art searches in foreign patent and sci/tech, medical, and engineering non-patent databases.

The results are in two sections. The section labeled "titles and KWIC format only" contains items that I did not think were relevant. The other section includes bibliographic information and, where available, abstracts. In this section I tagged the items that seemed to me to be most relevant, but **I suggest that you review all of the results in both sections.**

In the search results, a row of asterisks marks the end of a search, including the search strategy, in a particular set of databases and the beginning of a new search in a different set of databases.

I hope these results are useful. Please let me know if you would like me to expand or modify the search or if you have any questions.

Also attached is a "*Search Results Feedback Form*." Your feedback will help enhance our search services.

Serial 09/475768
Searcher: Jeanne Horrigan
January 30, 2002

1

File 351:Derwent WPI 1963-2001/UD,UM &UP=200206
File 344:CHINESE PATENTS ABS APR 1985-2001/Dec
File 347:JAPIO OCT 1976-2001/Sep(UPDATED 020102)
File 371:French Patents 1961-2002/BOPI 200204
>>>No sets currently exist

1/3,AB/6 (Item 6 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01075485

METHODS AND DEVICES FOR OCCLUDING THE ASCENDING AORTA AND MAINTAINING
CIRCULATION OF OXYGENATED BLOOD IN THE PATIENT WHEN THE PATIENT'S HEART
IS ARRESTED

VERFAHREN UND VORRICHTUNGEN ZUM VERSCHLIESSEN DER AUFSTEIGENDEN AORTA BEI
AUFRECHTERHALTUNG DES KREISLAUFS VON SAUERSTOFFREICHEM BLUT IM
PATIENTENKORPER NACH HERZSTILLSTAND

METHODES ET DISPOSITIFS D'OCCLUSION DE L'AORTE ASCENDANTE ET DE MAINTIEN DE
LA CIRCULATION DE SANG OXYGENE DANS LE CORPS D'UN PATIENT APRES ARRET
DU COEUR

PATENT ASSIGNEE:

HEARTPORT, INC., (2074211), 700 Bay Road, Redwood City, CA 94063, (US),
(Applicant designated States: all)

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LEGAL REPRESENTATIVE:

Harrison, David Christopher et al (31532), MEWBURN ELLIS York House 23
Kingsway, London WC2B 6HP, (GB)

PATENT (CC, No, Kind, Date): EP 983015 A2 000308 (Basic)
WO 9937202 990729

APPLICATION (CC, No, Date): EP 99903285 990122; WO 99US1340 990122

PRIORITY (CC, No, Date): US 12833 980123

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE

INTERNATIONAL PATENT CLASS: A61B-001/00

NOTE: No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

File 348:EUROPEAN PATENTS 1978-2002/Jan W04

File 349:PCT FULLTEXT 1983-2002/UB=20020124,UT=20020117

Set Items Description

S1 14 AU="PINAKI"

File 155:MEDLINE(R) 1966-2002/JAN W3

File 73:EMBASE 1974-2002/Jan W3

File 5:Biosis Previews(R) 1969-2002/Jan W3
File 34:SciSearch(R) Cited Ref Sci 1990-2002/Jan W4
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
>>>No sets currently exist

17/7/7 (Item 7 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

09402931 97304073 PMID: 9160358

Extracorporeal circulation for port-access cardiac surgery.

Toomasian JM; Peters WS; Siegel LC; Stevens JH

Department of Anesthesia, Stanford University Medical Center, CA 94305, USA.

Perfusion (ENGLAND) Mar 1997, 12 (2) p83-91, ISSN 0267-6591

Journal Code: BDD

Languages: ENGLISH

Document type: Journal Article; Review; Review, Tutorial

Record type: Completed

Minimally invasive techniques for cardiac surgery are a new approach in performing some cardiac operations. Minimally invasive surgery may minimize patient discomfort, length of stay in the hospital and postoperative rehabilitation. These procedures utilize a small thoracotomy for direct visualization of the heart. However, without the use of cardiopulmonary bypass, this approach is limited to some epicardial procedures such as coronary bypass grafting, where the heart rate is pharmacologically reduced. Port-access cardiac surgery is a new approach which provides all the benefits of minimally invasive surgery without sacrificing the advantages of cardiopulmonary bypass and myocardial preservation. Port-access cardiac surgery uses an anterior mediastinotomy and thoracic ports in conjunction with a specially designed set of endovascular catheters. These catheters provide a mode to arrest, preserve and vent the heart through an endoaortic occlusion balloon positioned in the ascending aorta. **A pulmonary artery vent and coronary sinus cardioplegia catheter can also be used.** These endovascular catheters, integrated with a modified heart-lung machine, provide complete cardiopulmonary support through extrathoracic cannulae inserted in a femoral artery and vein. Maintenance and monitoring of this endovascular cardiopulmonary bypass system requires the use of a kinetic pump in the venous drainage line to augment return to the heart-lung machine. Special guidelines and management parameters exist to optimize bypass with this catheter system. Using this system, port-access, minimally invasive surgery can be applied to a wider range of both epicardial and intracardiac procedures. (20 Refs.)

Record Date Created: 19970724

17/7/8 (Item 8 from file: 144)

DIALOG(R)File 144:Pascal

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12656682 PASCAL No.: 96-0351959

Salvage of ischemic myocardium with simplified and even delayed coronary sinus retroperfusion. Discussion

ALDEA G S; ZHANG X; RIVERS S; SHEMIN R J; ENGELMAN R M comment; SPOTNITZ

H M comment; KAISER G C comment

Department of Cardiothoracic Surgery, Boston University Medical Boston, Boston, Massachusetts, United States

Annual Meeting of The Society of Thoracic Surgeons, 32 (Orlando, FL USA)

1996-01-29

Journal: The Annals of thoracic surgery, 1996, 62 (1) 9-15

ISSN: 0003-4975 CODEN: ATHSAK Availability: INIST-13779;

354000060400760020

No. of Refs.: 23 ref.

Document Type: P (Serial); C (Conference Proceedings) ; A (Analytic)

Country of Publication: United States

Language: English

Background. Despite the proven efficacy of pressure-controlled intermittent coronary sinus obstruction (PICSO) and synchronized retrograde perfusion (SRP) in salvaging ischemic myocardium, wide application of these coronary sinus (CS) retroperfusion techniques has been limited by concerns about their safety and complexity and in particular the need for repeated occlusion of the CS with a balloon. To address these concerns a simplified retroperfusion technique (SR) was developed that continuously infuses superior vena caval blood at 7 mL/min into the CS catheter without balloon occlusion. Methods. Thirty pigs underwent 90 minutes of ischemia imposed by snaring the two largest diagonal branches of the left anterior descending artery and were randomized to one of five treatment groups: One group received no retroperfusion (control). Three groups had immediate (Im) institution of PICSO, SRP, or SR. In a final group, an initial 60 minutes of ischemia was followed by 30 minutes of delayed SR with superior vena caval blood. All animals were then placed on cardiopulmonary bypass and, after a 60-minute cardioplegic arrest, the coronary artery obstructions were removed, to simulate surgical revascularization. This was followed by 3 hours of reperfusion. The area of myocardium at risk and the area of infarction were determined by methylene blue and triphenyltetrazolium chloride staining with planimetric quantification. Results. Results are reported as mean \pm standard deviation. The area of the left ventricle at risk for infarction was similar in all the treatment groups and represented 22.3% \pm 4.1% of the left ventricular mass. The area of infarction after 3 hours of reperfusion was 48.5% \pm 11.0% for the control group, 26.8% \pm 7.3% for Im-PICSO, 24.9% \pm 4.8% for Im-SRP, 22.4% \pm 6.6% for Im-SR, and 27.7% \pm 7.2% for delayed SR ($p < 0.01$ for each group versus control). The mean CS pressure (in mm Hg) during treatment was 6.3 \pm 1.7 for the control group, 2

17/7/12 (Item 12 from file: 73)

DIALOG(R)File 73:EMBASE

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05806262 EMBASE No: 1994215961

Simultaneous arterial and coronary sinus cardioplegic perfusion: An experimental and clinical study

Ihnken K.; Morita K.; Buckberg G.D.; Aharon A.; Laks H.; Beyersdorf F.; Salerno T.A.

Klinik fur Thorax-/Herz-/Gefasschir., Johann Wolfgang-Goethe-Universitat, Theodor-Stern-Kai 7, D-60596 Frankfurt/Main Germany

Thoracic and Cardiovascular Surgeon (THORAC. CARDIOVASC. SURG.) (Germany) 1994, 42/3 (141-147)

CODEN: TVCHA ISSN: 0171-6425

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH; GERMAN

The existence of inhomogeneous distribution of coronary flow with antegrade or retrograde perfusion alone has led to alternating between these delivery routes to maximize their individual benefits. Concern over myocardial damage prevented the simultaneous application of antegrade and

retrograde cardioplegic blood delivery. Based upon the predominance of retrograde drainage via Thebesian veins, and evidence that pressure-controlled intermittent coronary sinus occlusion during antegrade cardioplegic delivery enhances its distribution and protective properties, **this study tests (a) the hypothesis that simultaneous aortic and coronary sinus perfusion is safe during aortic clamping, and (b) reports initial clinical application of this combined strategy in 174 patients.** Five minipigs (25-30 kg) underwent 1 hr of aortic clamping with simultaneous aortic (antegrade) and coronary sinus (retrograde) perfusion at 200 ml/min with normal blood (37degreeC) before and after 30 minutes of perfusion with either warm (37degreeC) or cold (4degreeC) blood cardioplegia (BCP). Furthermore, the combined strategy was used in 174 high-risk patients (NYHA class III-IV) at 3 university hospitals to perform myocardial protection during CABG or valve replacement, or a combination of both. Included were 16 patients in cardiogenic shock and 24 undergoing reoperation. In both the clinical and the experimental studies the coronary sinus pressure was always <40 mmHg in heating or arrested hearts. Experimental: Compared to control values (81.4 +/- 0.4% tissue water content), no right-ventricular (80.8 +/- 0.8%) or left-ventricular (79.5 +/- 0.3%) edema developed, no lactate was produced (control: -1.0 +/- 0.5 mg/100 g/min, empty beating: -0.64 +/- 5, and BCP arrest: -8.6 +/- 6.6). Left-ventricular contractility recovered completely as post-bypass end-systolic elastance (conductance catheter) and preload recruitable stroke work index returned to 101 +/- 3% and 109 +/- 9% of control values. Clinical: Mortality was 3.4%, 3 of the 6 patients died because of cardiac failure, eighteen patients (10.3%) required an intraaortic balloon pump (IABP) postoperatively, whereby in 16 of them (89%) the IABP had been implanted preoperatively for cardiogenic shock. There were 3 (1.7%) postoperative myocardial infarctions. These experimental and clinical findings overcome perceived concerns about myocardial damage from simultaneous arterial and coronary sinus perfusion, and suggest this approach may add to the armamentarium of cardioprotective strategies.

17/7/14 (Item 14 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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08245262 BIOSIS NO.: 000094036610

THE EFFECT OF INTERMITTENT CORONARY SINUS OCCLUSION ON CORONARY
SINUS PRESSURE DYNAMICS AND CORONARY ARTERIAL FLOW

AUTHOR: MATSUHASHI H; HASEBE N; KAWAMURA Y

AUTHOR ADDRESS: NISHIKAGURA 4-5-3-11, FIRST DEP. INTERNAL MED., ASAHIKAWA
MED. COLL., JPN.

JOURNAL: JPN CIRC J 56 (3). 1992. 272-285. 1992

FULL JOURNAL NAME: Japanese Circulation Journal

CODEN: JCIRA

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: The effect of intermittent coronary sinus occlusion (ICSO) with a balloon-tipped catheter on coronary arterial flow and coronary sinus pressure (CSP) dynamics were studied in open-chest dogs. During coronary sinus occlusion (CSO), CSP gradually rose and finally reached a plateau, while left coronary arterial mean flow velocities decreased. After the release of CSO, CSP immediately returned to baseline values, and the flow velocities correspondingly increased over the baseline values (hyperemic response). The decrease in ratios of flow velocities during CSO were unrelated to the duration of CSO, whereas

hyperemic responses were positively correlated with the CSO duration. In the repetitive application of CSO (ICSO), inadequately short duration of release period decreased the net volume of coronary arterial flow significantly. Moreover, hyperemic responses were abolished by maximal coronary vasodilation with intravenous adenosine, augmented by combination with coronary sinus retroperfusion and reduced by coronary arterial ischemia. These findings indicate the presence of a compensatory regulating mechanism in the coronary circulation during ICSO. We should attach much importance to this mechanism for the effectiveness of ICSO. To be accurate, the changes in coronary arterial flow as well as CSP dynamics should be considered when choosing adequate occlusion-release intervals of ICSO.

17/7/17 (Item 17 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2002 BIOSIS. All rts. reserv.
07310639 BIOSIS NO.: 000090090532
THE EFFECT OF SUPEROXIDE DISMUTASE ON REPERFUSION INJURY DURING OPEN HEART SURGERY WITH BLOOD CARDIOPLEGIA

AUTHOR: SUGIMOTO S
AUTHOR ADDRESS: DEP. SURG., SAPPORO MED. COLL.
JOURNAL: SAPPORO MED J 59 (3). 1990. 251-262. 1990
FULL JOURNAL NAME: Sapporo Medical Journal
CODEN: SIZSA
RECORD TYPE: Abstract
LANGUAGE: JAPANESE

ABSTRACT: This study was performed to assess the effect of superoxide dismutase (SOD) on ischemic myocardium and also to see whether SOD is able to reduce reperfusion injury after myocardial protection with blood cardioplegia (BCP). Thirty-two adult mongrel dogs were divided into 2 groups. In one group (Group A : n = 16), 10,000 U/kg of SOD was administered to the myocardium through the coronary artery via the aortic root with terminal BCP at 20 min. before the reperfusion. In the other group (Group B: n = 16), SOD was not administered. Each group was also divided into two sub-groups, one sub-group (Group A-1 : n = 8, Group B-1 : n = 8) was used to evaluate adenine nucleotides metabolism (ANM) of the myocardium and also to measure lipoperoxide concentration (LPO) in the coronary sinus blood, while the other sub-group (Group A-2 : n = 8, Group B-2 : n = 8) was used to evaluate cardiac function. Normothermic global ischemia (NGI) was induced by aortic cross-clamping for 30 min. under complete cardiopulmonary bypass (CPB) to deplete the energy reserve of the myocardium. After the NGI was induced, the myocardium was maintained with BCP under 20.degree. C of myocardial temperature for 2 hours. Following 2 hours of myocardial protection, the aorta was unclamped and the myocardium was reperfused with CPB for 2 hours. To evaluate the ANM of the myocardium, myocardial biopsy was performed; to measure LPO, blood was collected via the coronary sinus with a balloon catheter ; and to evaluate cardiac function, left ventricular stroke work index (LVSWI) was calculated, before the induction of ischemia and at 10, 30, 60, 90, and 120 min. after the reperfusion. Myocardial ATP content in Group A was significantly higher than that in Group B at 60 and 120 min. after reperfusion, while LPO of Group A was significantly lower than that of Group B at 10 min. after reperfusion. The ratio of LVSWI after reperfusion to the level of the pre-ischemic state was significantly higher in Group A than in Group B at 30 min. after reperfusion. In these experimental studies, the following

conclusions were obtained. Myocardial ATP was synthesized better in Group A than in Group B. SOD significantly suppressed peroxidation of lipids in the myocardium in Group A more than in Group B. The cardiac function at 30 min. after reperfusion was maintained at a significantly higher level in Group A than in Group B. Therefore, these results indicated that the direct administration in the myocardium of SOD provided a significant effect to prevent reperfusion injury after myocardial protection with BCP.

17/7/20 (Item 20 from file: 5)
DIALOG(R)File 5:BIOSIS Previews(R)
(c) 2002 BIOSIS. All rts. reserv.
06145163 BIOSIS NO.: 000085108315
HEMODYNAMIC OBSERVATIONS DURING PERCUTANEOUS TRANSLUMINAL CORONARY
ANGIOPLASTY IN THE PRESENCE OF SYNCHRONIZED DIASTOLIC CORONARY SINUS
RETROPERFUSION
AUTHOR: BEATT K J; SERRUYS P W; DE FEYTER P; VAN DEN BRAND M; VERDOUW P D;
HUGENHOLTZ P G
AUTHOR ADDRESS: CATHETERIZATION LAB., LAB. CLINICAL EXP. IMAGE PROCESSING,
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JOURNAL: BR HEART J 59 (2). 1988. 159-167. 1988
FULL JOURNAL NAME: British Heart Journal
CODEN: BHJUA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH
ABSTRACT: Animal studies have demonstrated that **synchronised coronary sinus retroperfusion with arterial blood** can provide effective perfusion of ischaemic myocardium. Preliminary clinical studies have shown that the technique can also be used with safety in human beings, and in the **present study its effectiveness was assessed in three patients undergoing repeated coronary artery occlusions during percutaneous transluminal coronary angioplasty**. Arterial blood was removed via an 8F catheter positioned in the femoral artery and delivered by a retroperfusion pumping system to a 7F retroperfusion balloon catheter positioned in the anterior cardiac vein. Ischaemia-related indices were monitored both before and during **coronary sinus retroperfusion**. These indices included high fidelity left ventricular pressure recordings and pressure derived indices (including velocities of isovolumic contraction and relaxation), as well as electrocardiographic changes and symptoms. Analysis of these variables showed that the ischaemic changes induced during coronary artery occlusion were not prevented by this type of coronary sinus retroperfusion. There was no major complication in any of the patients. It may be that adaptation of the technique or the use of alternative end points will establish a benefit, but further modifications of the delivery system are necessary for effective clinical use.

17/7/26 (Item 26 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
(c) 2002 Engineering Info. Inc. All rts. reserv.
01132452 E.I. Monthly No: EI8207056564 E.I. Yearly No: EI82008933
Title: NEW CATHETER-PUMP SYSTEM FOR DIASTOLIC SYNCHRONIZED CORONARY
SINUS RETROPERFUSION.
Author: Farcot, Jean C.; Barry, Michel; Bourdarias, Jean P.; Bardet, Jean
; Berdeaux, Alain; Giudicelli, Jean F.
Corporate Source: Univ de Paris 5 (Rene Descartes), Fr
Source: Medical Progress Through Technology v 8 n 1 Dec 1980 p 29-37
Publication Year: 1980

CODEN: MDPTBG ISSN: 0047-6552

Language: ENGLISH

Journal Announcement: 8207

Abstract: Coronary retroperfusion with the object of delivering oxygenated blood to the ischemic myocardium might be defined as the process of withdrawing blood from a systematic artery and reinjecting it into the coronary sinus. A diastolic synchronized retroperfusion catheter-pump system is presented and feasibility of achieving retrograde infusion of arterial blood was tested. An autoinflatable bladder catheter was specially designed to compartmentalize the coronary sinus at onset of diastole and insure unidirectional retrograde infusion of arterial blood. Bladder deflation at onset of systole allowed coronary venous drainage. Actuation of the retroperfusion bladder catheter was obtained from an electropneumatic console triggered by the electrocardiogram. In vitro and animal studies indicate that this system converted the natural (steady) arteriovenous shunt flow into an artificially pulsed shunt flow, with maximal positive flow in diastole and trivial negative flow in systole but did not alter absolute magnitude of shunt flow. Thus, diastolic synchronized retroperfusion of arterial blood through the coronary sinus many provide temporary protection from acute myocardial ischemia. 17 refs.

File 155:MEDLINE(R) 1966-2002/JAN W3

File 144:Pascal 1973-2002/Jan W4

File 5:Biosis Previews(R) 1969-2002/Jan W3

File 6:NTIS 1964-2002/Feb W2

File 2:INSPEC 1969-2002/Jan W4

File 8:Ei Compendex(R) 1970-2002/Jan W4

File 99:Wilson Appl. Sci & Tech Abs 1983-2001/Dec

File 238:Abs. in New Tech & Eng. 1981-2002/Jan

File 65:Inside Conferences 1993-2002/Jan W4

File 77:Conference Papers Index 1973-2002/Jan

File 73:EMBASE 1974-2002/Jan W3

File 34:SciSearch(R) Cited Ref Sci 1990-2002/Jan W4

File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec

File 94:JICST-EPlus 1985-2002/Dec W3

File 35:Dissertation Abs Online 1861-2002/Jan

Set	Items	Description
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S1	147778	BALLOON
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S2	424087	CATHETER?
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S3	18009	CORONARY() SINUS
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S4	41198	CORONARY() VESSELS
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S5	903733	MYOCARDI??
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S6	1628087	COLLECT???
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S7	239517	WITHDRAW???
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S8	52741	EVACUAT???
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S9	1366027	REMOV???
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S10	64027	SUCTION????
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S11	63586	RECIRCULAT???
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S12	480922	RETURN???
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S13	392	S1 AND S2 AND S3
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S14	3751463	S6:S12
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S15	66	S13 AND S14
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S16	26	RD (unique items)
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S17	26	Sort S16/ALL/PY,D
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S18	283	(S1(5N)S2 AND S4:S5 AND S6:S12) NOT S15
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S19	3144	S4:S5(5N)S6:S12
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S20 12 S18 AND S19
S21 6 RD (unique items)

16/3,AB,K/1 (Item 1 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text
(c) 2002 The HW Wilson Co. All rts. reserv.
04386670 H.W. WILSON RECORD NUMBER: BGSA00136670
Protein washdown as a defense mechanism against myocardial edema.
Stewart, Randolph H
Geissler, Hans J; Allen, Steven J
American Journal of Physiology (Am J Physiol) v. 279 no4 (Oct. 2000 pt2) p.
H1864-H1868
SPECIAL FEATURES: bibl il ISSN: 0002-9513
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
ABSTRACT: Stewart, Randolph H., Hans J. Geissler, Steven J. Allen, and
Glen A. Laine. Protein washdown as a defense mechanism against myocardial
edema. Am J Physiol Heart Circ Physiol 279: H1864-H1868, 2000.--Myocardial
edema occurs in many pathological conditions. We hypothesized that protein
washdown at the myocardial microvascular exchange barrier would change the
distribution of interstitial proteins from large to small molecules and
diminish the effect of washdown on the colloid osmotic pressure (COP) of
interstitial fluid and lymph. **Dogs were instrumented with coronary sinus
balloon -tipped catheters and myocardial lymphatic cannulas to
manipulate myocardial lymph flow and to collect lymph.** Myocardial venous
pressure was elevated by balloon inflation to increase transmicrovascular
fluid flux and myocardial lymph flow. COP of lymph was measured directly
and was also calculated from protein concentration. Decreases occurred in
both protein concentration and COP of lymph. The proportion of lymph
protein accounted for by albumin increased significantly, whereas that
accounted for by b-lipoprotein decreased significantly. The change in the
calculated plasma-to-lymph COP gradient was significantly greater than the
change in the measured COP gradient. We conclude that the change in the
distribution of interstitial fluid protein species decreases the effect of
protein washdown on interstitial fluid COP and limits its effectiveness as
a defense mechanism against myocardial edema formation. Reprinted by
permission of the publisher.

19/3,AB,K/1 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2002 The Gale Group. All rts. reserv.
07298137 Supplier Number: 61878594
Cardima, Inc. Reports 25% Reduction in Net Loss from Q4 1999.
Business Wire, p1232
May 4, 2000
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1031
... In April 2000, the Company announced it was also awarded a patent
for a guiding catheter with a balloon for accessing, visualizing and
then delivering intravascular devices to the veins of a patient's...
...which is significant because it protects **Cardima's technology in the
unique access of the coronary sinus** leading to the venous vessels of
the heart. Cardima's novel guiding catheters, the Naviport...

19/3,AB,K/3 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2002 The Gale Group. All rts. reserv.
03962458 Supplier Number: 50341463 (USE FORMAT 7 FOR FULLTEXT)
PRODUCT BRIEFS: FDA okays 1/3-size cochlear implant
The BBI Newsletter, v21, n8, pN/A
August 1, 1998
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 2356

TEXT:

...a patient suffer cardiac arrest. * Cardima (Fremont, California) has received FDA approval for its Vueport balloon occlusion guid-ing catheter , a balloon catheter with a compliant bal-loon on its distal tip designed to allow access and enhance...
...venous system for mapping of ventricular tachycardia. The device is **designed to temporarily occlude the coronary sinus** , which is the main draining blood vessel in the heart, allowing the physician to inject...

File 98:General Sci Abs/Full-Text 1984-2001/Dec
File 9:Business & Industry(R) Jul/1994-2002/Jan 28
File 16:Gale Group PROMT(R) 1990-2002/Jan 29
File 160:Gale Group PROMT(R) 1972-1989
File 148:Gale Group Trade & Industry DB 1976-2002/Jan 29
File 621:Gale Group New Prod.Annou.(R) 1985-2002/Jan 29
File 636:Gale Group Newsletter DB(TM) 1987-2002/Jan 29
File 441:ESPICOM Pharm&Med DEVICE NEWS 2002/Jan W1
File 15:ABI/Inform(R) 1971-2002/Jan 29
File 88:Gale Group Business A.R.T.S. 1976-2002/Jan 29
File 813:PR Newswire 1987-1999/Apr 30
File 20:Dialog Global Reporter 1997-2002/Jan 29

Set	Items	Description
S1	64322	BALLOON
S2	52645	CATHETER?
S3	320	CORONARY() SINUS
S4	699	CORONARY() VESSELS
S5	35277	MYOCARDI??
S6	2263909	COLLECT???
S7	612671	WITHDRAW???
S8	85109	EVACUAT???
S9	1338957	REMOV???
S10	20073	SUCTION????
S11	17315	RECIRCULAT???
S12	3477680	RETURN???
S13	5991	S1(3N) S2
S14	0	S S13 (10N) S3
S15	8	S13(10N) S3
S16	3	RD (unique items)
S17	16	S1(5N) S2(S) S3
S18	8	S17 NOT S15
S19	4	RD (unique items)

File 155:MEDLINE(R) 1966-2002/JAN W3

File 144:Pascal 1973-2002/Jan W4
File 5:Biosis Previews(R) 1969-2002/Jan W3
File 6:NTIS 1964-2002/Feb W2
File 2:INSPEC 1969-2002/Jan W4
File 8:Ei Compendex(R) 1970-2002/Jan W4
File 99:Wilson Appl. Sci & Tech Abs 1983-2001/Dec
File 238:Abs. in New Tech & Eng. 1981-2002/Jan
File 65:Inside Conferences 1993-2002/Jan W4
File 77:Conference Papers Index 1973-2002/Jan
File 73:EMBASE 1974-2002/Jan W3
File 34:SciSearch(R) Cited Ref Sci 1990-2002/Jan W4
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
File 94:JICST-EPlus 1985-2002/Dec W3
File 35:Dissertation Abs Online 1861-2002/Jan
Set Items Description
S1 147778 BALLOON
S2 424087 CATHETER?
S3 370798 DRAIN???
S4 18009 CORONARY() SINUS
S5 2 S1(5N)S2 AND S3(5N)S4
S6 2 RD (unique items) [see "Titles" section]

File 98:General Sci Abs/Full-Text 1984-2001/Dec
File 9:Business & Industry(R) Jul/1994-2002/Jan 28
File 16:Gale Group PROMT(R) 1990-2002/Jan 29
File 160:Gale Group PROMT(R) 1972-1989
File 148:Gale Group Trade & Industry DB 1976-2002/Jan 29
File 621:Gale Group New Prod. Annou. (R) 1985-2002/Jan 29
File 636:Gale Group Newsletter DB(TM) 1987-2002/Jan 29
File 441:ESPICOM Pharm&Med DEVICE NEWS 2002/Jan W1
File 20:Dialog Global Reporter 1997-2002/Jan 29
File 813:PR Newswire 1987-1999/Apr 30
File 15:ABI/Inform(R) 1971-2002/Jan 29
File 88:Gale Group Business A.R.T.S. 1976-2002/Jan 29
Set Items Description
S1 64322 BALLOON
S2 52645 CATHETER?
S3 233103 DRAIN???
S4 320 CORONARY() SINUS
S5 2 S1(5N)S2(S)S3(5N)S4
S6 1 RD (unique items) [see "Titles" section]

19/7/4 (Item 4 from file: 351)

DIALOG(R)File 351:Derwent WPI

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013084461 **Image available**

WPI Acc No: 2000-256333/200022

Two-stage venous return catheter for use in cardiopulmonary bypass procedures comprises a suture loop that can be manipulated to temporarily anchor a retrograde cardioplegia catheter in place within the coronary sinus of a patient

Patent Assignee: YACOUBIAN V S (YACO-I)

Inventor: YACOUBIAN V S

Number of Countries: 020 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200010631	A1	20000302	WO 99US19224	A	19990824	200022 B

Priority Applications (No Type Date): US 98138763 A 19980824

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 200010631	A1	E	21 A61M-005/32	

Designated States (National): CA JP

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU
MC NL PT SE

Abstract (Basic): WO 200010631 A1

NOVELTY - The catheter comprises a venous return catheter (20) with distal (26) and proximal (28) drainage openings, a suture loop (32), and a tourniquet side-tube that guides the loop into the proximal catheter wall. The loop emerges from one of the distal openings and is held there until required by a temporary tape and suture link back to the side-tube. Its free ends (32a,32b) can be manipulated at the proximal end of the side-tube, where they can be fixed using a clamp (40).

DETAILED DESCRIPTION - The catheter during use is first placed in the right atrium and inferior vena cava, then a retrograde catheter (42) is positioned within the coronary sinus (50) so that its balloon (48) is close to the right atrium (46). Next, the temporary link is severed from the side-tube and used to pull the loop over the exposed end of the retrograde catheter, then discarded. Finally, the suture's free ends are pulled until the loop anchors the retrograde catheter against the venous return catheter, and are then secured using the side-tube clamp. An INDEPENDENT CLAIM is also included for a method for stabilizing a retrograde cardioplegia catheter within coronary sinus.

USE - For use as a two-stage venous return catheter in cardiopulmonary bypass procedures involving retrograde cardioplegia.

ADVANTAGE - The catheter and its anchor loop allows the retrograde catheter's balloon to be positioned close to the junction of the coronary sinus and the right atrium without risk of being dislodged. This ensures that veins opening into the coronary sinus are perfused with cardioplegia fluid.

DESCRIPTION OF DRAWING(S) - The drawing shows a partially cut-away view of a heart with the catheter in place and a retrograde catheter secured against it.

Venous return catheter (20)

Drainage openings (26,28)

Suture loop (32)

Suture ends (32a,32b)

Clamp (40)

Retrograde catheter (42)

Right atrium (46)

Balloon (48)

Coronary sinus (50)

pp; 21 DwgNo 3/4

Derwent Class: P34

International Patent Class (Main): A61M-005/32

19/7/7 (Item 7 from file: 351)

DIALOG(R)File 351:Derwent WPI

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011852970

WPI Acc No: 1998-269880/199824

Invasive surgical procedure for treating myocardiac ischaemia - probing

**coronary artery for infusing medicinal preparation and collecting whole
flow of coronary blood where coronary sinus is obstructed**

Patent Assignee: OSIEV A G (OSIE-I)

Inventor: OSIEV A G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
RU 2093065	C1	19971020	RU 9357714	A	19931229	199824 B

Priority Applications (No Type Date): RU 9357714 A 19931229

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
RU 2093065	C1		6	A61B-005/02	

Abstract (Basic): RU 2093065 C

The procedure consists of inserting a retroperfusion balloon catheter into the coronary sinus and probing the coronary artery in order to infuse a medicinal preparation. The whole of the coronary blood flow is drawn off when the coronary sinus is obstructed, independent of the phase of the cardiac cycle, for purification before being returned to the blood stream.

ADVANTAGE - Procedure enables preparation to reach affected organ in antegrade direction, making it safer to perform. It does not need to be synchronised with phases of cardiac cycle and allows systemic action of medication to be eliminated. It is more efficient and less costly, and requires shorter hospital stay.

Dwg.0/0

Derwent Class: P31

International Patent Class (Main): A61B-005/02

19/7/12 (Item 12 from file: 351)

DIALOG(R)File 351:Derwent WPI

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010502625 **Image available**

WPI Acc No: 1995-403947/199551

Tissue retroperfusion catheter e.g. for coronary sinus - has lumens between distal ports and pump inlet and outlet for safe low-pressure perfusion

Patent Assignee: UNIV BOSTON (UYBO-N)

Inventor: ALDEA G S

Number of Countries: 024 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9530447	A1	19951116	WO 95US5654	A	19950505	199551 B
US 5533957	A	19960709	US 94238860	A	19940506	199633
			US 95444049	A	19950518	
US 5597377	A	19970128	US 94238860	A	19940506	199710
EP 906132	A1	19990407	EP 95919019	A	19950505	199918
			WO 95US5654	A	19950505	

Priority Applications (No Type Date): US 94238860 A 19940506; US 95444049 A 19950518

Cited Patents: US 4502502; US 4934996; US 5024668; US 5209730; US 5221256; US 5345932; US 5425639

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9530447	A1	E	34	A61M-011/00	
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Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT KE LU MC

MW NL OA PT SD SE SZ UG

US 5533957 A 16 A61N-001/362 Div ex application US 94238860

US 5597377 A 15 A61N-001/362
EP 906132 A1 E A61M-011/00 Based on patent WO 9530447
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC
NL PT SE

Abstract (Basic): WO 9530447 A

A catheter for retroperfusion of tissue having a systemic vein coupled at a junction to the greater circulatory system has a tip (12) which extends in the vein to 5-10 cm from the junction, **and has withdrawal and infusion lumens** coupled to respective distal ports (14) and to the inlet and outlet of a pump (24).

A third lumen is coupled between a tip port and a pressure sensor (30). The pump is controlled so that retroperfusate flow at the infusion port is 5-50 ml/min at a pressure less than 15 mm Hg. In part a **coronary sinus retroperfusion catheter** tip extends within the coronary sinus to 5-10 cm from the sinus ostium.

USE/ADVANTAGE - To limit myocardial damage in intractable ischaemia or acute infarction. Reduces the danger of vein and tissue damage due to repeated obstruction by a balloon, and can perfuse with venous blood and/or tissue enhancement soln.

Dwg.1/6

Abstract (Equivalent): US 5597377 A

A non-occluding catheter for retroperfusion of tissue having a defined systemic vein, said vein draining blood from said tissue through a venous junction coupling said vein to the greater circulatory system, comprising:

a non-occluding infusion tip, such that when retroperfusing said tissue with a retroperfusate flow, said tip extends within said vein to a depth in a range of about 2 to 4 inches (5.08 to 10.16 cm) from said venous junction and does not occlude said vein, such that said blood continues to flow from said vein;

a pump having an inlet orifice and an outlet orifice;

a tube defining a plurality of channels including at least one withdrawal channel, each of which has a first withdrawal end, a withdrawal port, and a second withdrawal end, wherein said first withdrawal end is coupled to said withdrawal port and said second withdrawal end is coupled to said inlet orifice of said pump; at least one infusion channel, each of which has a first infusion end, an infusion port located in said infusion tip, and a second infusion end, wherein said first infusion end is coupled to said infusion port and said second infusion end is coupled to said outlet orifice of said pump; and a pressure monitoring channel for monitoring pressure at a pressure port at said infusion tip having a first monitoring end, a second monitoring end, and a pressure sensor, wherein said first monitoring end is coupled to said pressure port and said second monitoring end is coupled to said pressure sensor; and

means for controlling said pump having a flowmeter for measuring a rate of said retroperfusate flow, whereby fluid entering said withdrawal port is discharged at said infusion port at a flow rate in a range of about 5 to 50 ml./min. and at a pressure less than about 15 mm Hg, said tube and tip made from biocompatible, non-thrombogenic material.

Dwg.1/6

US 5533957 A

A method for retroperfusion of tissue having a defined systemic vein, said vein draining blood from said tissue through a venous junction coupling said vein to the greater circulatory system comprising the steps of:

inserting a non-occluding catheter having a non-occluding infusion tip through a percutaneous venous entry;
guiding said infusion tip into said vein, such that when retroperfusing the tissue, said tip extends within said vein to a depth in a range of about 2 to 4 inches (5.08 to 10.16 cm) from said venous junction; and
retroperfusing the tissue by delivering a non-synchronized retroperfusate flow of fluid at a rate in a range of about 5 to 50 mil./min. and at a pressure less than about 15 mm Hg.

Dwg. 5/6

Derwent Class: P34; S05

International Patent Class (Main): A61M-011/00; A61N-001/362

International Patent Class (Additional): A61M-001/36; A61M-031/00

19/7/14 (Item 14 from file: 351)

DIALOG(R) File 351:Derwent WPI

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003886081

WPI Acc No: 1984-031622/198406

Catheter for recycling arterial blood to treat infarction - of material with elastic memory e.g. PVC and cranked to facilitate insertion

Patent Assignee: FARCOT J C (FARC-I)

Inventor: PIZON V

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2529083	A	19831230	FR 8211061	A	19820624	198406 B

Priority Applications (No Type Date): FR 8211061 A 19820624; FR 816160 A 19810327

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
FR 2529083	A	11		

Abstract (Basic): FR 2529083 A

The parent patent relates to a balloon type catheter (100) partic. for the treatment of an infarction by injection of arterial blood into the coronary sinus. The injection is synchronous with the patient's cardiac rhythm. The catheter tube (101) is made of a material with elastic memory, i.e. capable of returning to its original form when bending forces are removed. PVC is a suitable material.

The tube is formed with two spaced cranks (104&105) in the same plane and in the same direction of rotation. The crank (105) adjacent to the balloon (103) has an included angle (B) between 120 and 150 deg. The other crank angle (A) is between 130 and 150 deg. The distance (l) between the cranks is pref. about 7cm.

The cranks facilitate the surgeon's task of inserting the catheter.

Derwent Class: B07; P34

International Patent Class (Additional): A61M-001/00; A61M-025/00

File 351:Derwent WPI 1963-2001/UD,UM &UP=200206

File 344:CHINESE PATENTS ABS APR 1985-2001/Dec

File 347:JAPIO OCT 1976-2001/Sep(UPDATED 020102)

File 371:French Patents 1961-2002/BOPI 200204

Set	Items	Description
S1	13975	BALLOON
S2	23047	CATHETER?
S3	182	CORONARY() SINUS

S4 132 CORONARY()VESSELS
S5 8734 MYOCARDI??
S6 411905 COLLECT???
S7 83398 WITHDRAW???
S8 66612 EVACUAT???
S9 1194714 REMOV???
S10 203887 SUCTION????
S11 36463 RECIRCULAT???
S12 332984 RETURN???
S13 232127 DRAIN???
S14 0 S1(3N)S2 AND S3(5N)(S6:S10 OR S13)
S15 42 S1 AND S2 AND S3
S16 2006936 S6:S10 OR S13
S17 14 S15 AND S16
S18 14 IDPAT (sorted in duplicate/non-duplicate order)
S19 14 IDPAT (primary/non-duplicate records only)

18/3,AB/7 (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00743297
PRESSURE-CONTROLLED CONTINUOUS CORONARY SINUS OCCLUSION DEVICE AND METHODS
OF USE
DISPOSITIF A PRESSION REGULEE CONCU POUR L'OCCLUSION CONTINUE DU SINUS
CORONAIRE ET PROCEDE D'UTILISATION
Patent Applicant/Assignee:
TRANSVASCULAR INC, 1505-D Adams Drive, Menlo Park, CA 94025, US, US
(Residence), US (Nationality)
Inventor(s):
SHMULEWITZ Ascher, 4338 West Mercer Way, Mercer Island, WA 98040, US
BLEY Robert S, 158 Hillside Avenue, Menlo Park, CA 94025, US
WILCOX Robert L, 9213 N.E. 151 Street, Bothell, WA 98011, US
Legal Representative:
PISANO Nicola A, Fish & Neave, 1251 Avenue of the Americas, New York, NY
10020, US
Patent and Priority Information (Country, Number, Date):
Patent: WO 200056387 A1 20000928 (WO 0056387)
Application: WO 2000US7732 20000324 (PCT/WO US0007732)
Priority Application: US 99275797 19990325
Designated States: AU CA JP
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Filing Language: English
Fulltext Word Count: 6412
English Abstract

Apparatus, and methods for perfusing ischemic myocardium are provided using a tubular member (12) having an end region (16) adapted to be disposed in a portion of a patient's venous vasculature. The end region (16) includes a lumen (20), and a valve (24) in communication with the lumen (20) that controls pressure within an occluded portion of the vasculature by venting excess blood at a location proximal of a point of occlusion of the vasculature via the valve (24). An occlusion element (26) optionally may be provided in the end region (16) that retains the tubular member (12) within the patient's venous vasculature, and occludes

the flow of blood around the lumen (20).

18/3,AB/9 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00547258
VENOUS RETURN CATHETER WITH ANCHOR MEANS AND METHOD FOR USE
CATHETER DE RETOUR VEINEUX DOTE D'UN SYSTEME D'ACCROCHAGE ET SON PROCEDE
D'UTILISATION

Patent and Priority Information (Country, Number, Date):

Patent: WO 200010631 A1 20000302 (WO 0010631)

Application: WO 99US19224 19990824 (PCT/WO US9919224)

Priority Application: US 98138763 19980824

Designated States: CA JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 5924

English Abstract

This invention is a two stage venous catheter (20) which removably anchors a retrograde cardioplegia catheter (42) in place within the coronary sinus of a patient. A suture loop (32) extends therefrom in the region of the right atrium near the coronary sinus. The suture loop (32) is tightened around a retrograde cardioplegia catheter (42), and thus helps prevent inadvertent dislodgement of the cardioplegia catheter (42) from the coronary sinus. The cardioplegia catheter (42) which is to be anchored in place by the suture loop (32) includes a balloon (48) positioned within the coronary sinus which blocks the coronary ostium. Alternatively, an elongated balloon (148) which substantially blocks the coronary veins emptying near the coronary ostium, is utilized.

18/3,AB/16 (Item 16 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00439805

IMPROVED BALLOON CATHETER
CATHETER A BALLONNET AMELIORE

Patent Applicant/Assignee:

MEDTRONIC INC,

Inventor(s):

BARRA Jean-Aubert,

BOOTH William M,

BOCHEFF Carolyn R,

SANDMORE Donald R,

SHOREY Frederick A,

RODRIGUEZ Ernest J,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9830269 A2 19980716

Application: WO 97US24090 19971230 (PCT/WO US9724090)

Priority Application: US 97780631 19970108

Designated States: CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 6224

English Abstract

An improved balloon catheter has a catheter body with an expandable member, such as a balloon, mounted to the exterior surface thereof.

Preferably, means for preventing sticking of the expandable balloon to the exterior surface of the catheter body are provided. In one aspect,

the catheter has an expandable member, preferably a balloon, positioned substantially equidistant from the proximal and distal ends of the catheter body. The retention catheter is positioned externally of the heart and partially surrounds the heart so that the balloon is positioned immediately adjacent the coronary sinus and when inflated, the balloon bears against the coronary sinus and at least one of the inferior vena cava and diaphragm thereby preventing inadvertent movement or removal of the RCSP catheter from the coronary sinus .

18/3,AB/19 (Item 19 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00412752
MINIMALLY-INVASIVE DEVICES AND METHODS FOR TREATMENT OF CONGESTIVE HEART FAILURE
DISPOSITIFS ET PROCEDES AVEC INTERVENTION INVASIVE MINIMUM POUR LE
TRAITEMENT DE L'INSUFFISANCE CARDIAQUE GLOBALE
Patent and Priority Information (Country, Number, Date):
Patent: WO 9803213 A1 19980129
Application: WO 97US12934 19970723 (PCT/WO US9712934)
Priority Application: US 96685262 19960723
Designated States: AU CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Fulltext Word Count: 7880
English Abstract

A method of treatment of congestive heart failure comprises the steps of introducing an aortic occlusion catheter (26) through a patient's peripheral artery, the aortic occlusion catheter (26) having an occluding member (30) movable from a collapsed position to an expanded position; positioning the occluding member (30) in the patient's ascending aorta; moving the occluding member (30) from the collapsed shape to the expanded shape after the positioning step; introducing cardio-plegia fluid into the patient's coronary blood vessels to arrest the patient's heart; maintaining circulation of oxygenated blood through the patient's arterial system; and reshaping an outer wall of the patient's heart while the heart is arrested so as to reduce the transverse dimension of the left ventricle. The ascending aorta may be occluded and cardio-plegia fluid delivered by means of an occlusion balloon (44) attached to the distal end of an elongated catheter (42) positioned trans-luminal in the aorta from a femoral, subclavian, or other appropriate peripheral artery.

18/3,AB/20 (Item 20 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00407689
MULTI-LUMEN CATHETER AND METHOD OF MANUFACTURE
CATHETER A PASSAGES MULTIPLES ET PROCEDE DE FABRICATION
Patent Applicant/Assignee:
HEARTPORT INC,
Inventor(s):
CORVI Timothy J,
STEVENS John H,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9748434 A1 19971224
Application: WO 97US10346 19970617 (PCT/WO US9710346)
Priority Application: US 96664716 19960617; US 97782113 19970113
Designated States: AU CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE .

Publication Language: English
Fulltext Word Count: 10080
English Abstract

A multi-lumen catheter (10) having a reinforcing member (42) wrapped around at least one of the lumens (40) in a helical manner. An inflation lumen (43) is positioned outside the reinforcing member (42) for inflating a balloon (11) carried by the catheter (10). A two-lumen extrusion (339A) is bonded to the reinforced lumen (337A) to form the multi-lumen catheter. The multi-lumen catheter is particularly useful as an aortic occlusion catheter.

18/3,AB/21 (Item 21 from file: 349) *a duplicate*
DIALOG(R) File 349:PCT FULLTEXT
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00387056

LESS-INVASIVE DEVICES AND METHODS FOR CARDIAC VALVE SURGERY
DISPOSITIFS MOINS VULNERANTS DE CHIRURGIE DES VALVULES CARDIAQUES ET
PROCEDES ASSOCIES

Patent Applicant/Assignee:

HEARTPORT INC.

Inventor(s):

DONLON Brian S,
PETERS William S,
GARRISON Michi E,
ROSENMAN Daniel C,
STEVENS John H,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9727799 A1 19970807

Application: WO 97US1018 19970123 (PCT/WO US9701018)

Priority Application: US 96594870 19960131

Designated States: AU CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 24321

English Abstract

Systems and methods are disclosed for performing less invasive surgical procedures within the heart. A method for less invasive repair or replacement of a cardiac valve (216) comprises placing an instrument (290) through an intercostal access port (212) and through a penetration in a wall of a vessel in communication with the heart, advancing the instrument (290) into the heart, using the instrument (290) to perform a surgical intervention on a cardiac valve (216) in the heart under visualization through an intercostal access port. The surgeons hands are kept outside of the chest during each step. The surgical intervention may comprise replacing the cardiac valve with a prosthetic valve, wherein the native valve is removed using a tissue removal instrument (206), the native valve annulus is sized with a specialized sizing device (216), a prosthetic valve is introduced through an intercostal access port (212) and through the penetration in the vessel, and the prosthetic valve is secured at the native valve position, all using instruments positioned through intercostal access ports without placing the hands inside the chest. Systems and devices for performing these procedures are also disclosed.

18/3,AB/22 (Item 22 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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00347560

ENDOVASCULAR CARDIAC VENTING CATHETER AND METHOD
CATHETER INTRAVASCULAIRE DE DECHARGE CARDIAQUE ET PROCEDE ASSOCIE
Patent Applicant/Assignee:

HEARTPORT INC,

Inventor(s):

STEVENS John H,
KRIER Jeffrey W,
VALLEY Kirsten L,
EVARD Philip C,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9630073 A1 19961003

Application: WO 96US3330 19960312 (PCT/WO US9603330)

Priority Application: US 95415238 19950330

Designated States: AU CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 27912

English Abstract

A venting catheter, system and method, are provided for withdrawing blood and other fluids from a patient's heart to facilitate decompressing the heart during cardioplegia arrest and cardiopulmonary bypass, without the need for a thoracotomy and without puncturing the aorta, pulmonary artery, or heart itself. The venting catheter (602) is configured to be introduced into a peripheral vein and intra-luminal advanced through the right side of the heart and into the pulmonary artery. The venting catheter includes a lumen (610) configured to withdraw blood at a rate of at least about 50 ml/min at a pressure of no less than about -350 mmHg. A flow directing means (615) is provided to facilitate guiding the catheter into the pulmonary artery by being carried by blood flow through the heart. The cardiac venting system may include, in addition to the cardiac venting catheter, a cardiopulmonary bypass system to maintain circulation of oxygenated blood, and means for arresting the patient's heart.

18/3,AB/23 (Item 23 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00347559

SYSTEM AND METHODS FOR PERFORMING ENDOVASCULAR PROCEDURES
SYSTEME ET PROCEDES POUR EFFECTUER DES ACTES ENDOVASCULAIRES

Patent Applicant/Assignee:

HEARTPORT INC,

Inventor(s):

STEVENS John H,
PETERS William S,
STERMAN Wesley D,
GIFFORD Hansen S III,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9630072 A1 19961003

Application: WO 96US3266 19960311 (PCT/WO US9603266)

Priority Application: US 95415366 19950330

Designated States: AU CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 18148

English Abstract

This invention is a system for inducing cardio-plegia arrest and performing an endovascular procedure within the heart or blood vessels of a patient. An endo-aortic partitioning catheter (10) has an inflatable

balloon (11) which occludes the ascending aorta (12) when inflated. Cardio-plegia fluid may be infused through a lumen of the endo-aortic partitioning catheter (39) to stop the heart while the patient's circulatory system is supported on cardiopulmonary bypass. One or more endovascular devices (500) are introduced through an internal lumen (40) of the endo-aortic partitioning catheter (30) to perform a diagnostic or therapeutic endovascular procedure within the heart or blood vessels of the patient. Surgical procedures such as coronary artery bypass surgery or heart valve replacement may be performed in conjunction with the endovascular procedure while the heart is stopped. Embodiments of the system are described for performing, e.g., fiberoptic angioscopy of structures within the heart and its blood vessels, and valvuloplasty for correction of valvular stenosis.

18/3,AB/25 (Item 25 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00317605

VASCULAR TREATMENT METHOD AND APPARATUS
PROCEDE ET APPAREIL DE TRAITEMENT VASCULAIRE

Patent Applicant/Assignee:

CORMEDICS CORP.,
IGO Stephen R,
MEADOR James W,

Inventor(s):

IGO Stephen R,
MEADOR James W,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9600112 A1 19960104
Application: WO 95US9055 19950623 (PCT/WO US9509055)
Priority Application: US 94264458 19940623

Designated States: AM AU BB BG BR BY CA CN CZ DE EE FI GE HU JP KE KG KP KR
KZ LK LR LT LV MD MG MN MW MX NO NZ PL RO RU SD SI SK TJ TT UA US UZ VN
KE MW SD SZ UG AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF
CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 9895

English Abstract

A method and apparatus for treating blood vessels in a mammal, particularly humans, especially coronary blood vessels (3), for vascular thrombosis and angioplasty restenosis, thereby to decrease incidence of vessel re-thrombosis (3'), unstable angina and myocardial infarction, by administering (11, 15) a congener of an endothelium-derived bioactive agent, especially a nitrovasodilator, including one or more of nitric oxide or a nitric oxide donor agent, such as sodium nitroprusside and nitroglycerin, to an extravascular treatment site (4) at a therapeutically effective dosage rate.

18/3,AB/26 (Item 26 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00298325

SYSTEM FOR CARDIAC PROCEDURES
SYSTEME POUR INTERVENTIONS CARDIAQUES

Patent Applicant/Assignee:

STEVENS John H,

Inventor(s):

STEVENS John H,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9516476 A1 19950622

Application: WO 93US12323 19931217 (PCT/WO US9312323)

Priority Application: WO 93US12323 19931217

Designated States: AU CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 9578

English Abstract

A system for accessing a patient's cardiac anatomy which includes an **occluding catheter with an expandable member or balloon on a distal extremity of the catheter which when expanded within the patient's ascending aorta separates the left side of the heart from the rest of the patient's arterial system.** A cardiopulmonary by-pass is connected to a major vein, e.g. femoral, and a major artery, e.g. femoral, to withdraw blood from the major vein, remove carbon dioxide, oxygenate the withdrawn venous blood and then return the oxygenated blood to the patient's arterial system through the major artery. Preferably, the heart muscle or myocardium is paralyzed by the retrograde or antegrade delivery of a liquid containing cardioplegic material to the myocardium through patient's coronary sinus and coronary veins. **The pulmonary trunk is vented by withdrawing liquid from the trunk through an inner lumen of an elongated catheter or by holding at least partially open the pulmonary valve and preferably also the tricuspid valve which depressurizes the left atrium.** The cardiac accessing system is particularly suitable for removing aortic valves and replacing the removed valve with a prosthetic valve.

18/3,AB/27 (Item 27 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2002 WIPO/Univentio. All rts. reserv.

00283604

IMAGING, ELECTRICAL POTENTIAL SENSING, AND ABLATION CATHETERS

CATHETERS DE VISUALISATION, DETECTION DE POTENTIELS ELECTRIQUES, ET
ABLATION DES TISSUS

Patent Applicant/Assignee:

BOSTON SCIENTIFIC CORPORATION,

Inventor(s):

ABELE John E,

CROWLEY Robert J,

LENNOX Charles D,

ROPIAK Susan M,

ROBERTS Troy W,

BEAUDET Stephen P,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9501751 A1 19950119

Application: WO 94US7535 19940701 (PCT/WO US9407535)

Priority Application: US 9386523 19930701; US 9386543 19930701; US
9386740 19930701

Designated States: CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 33042

English Abstract

An acoustic imaging system for use within a heart has a catheter (6), an ultrasound device (10) incorporated into the catheter (6), and an

electrode (300, 304, 334, 394) mounted on the catheter (6). The ultrasound device (10) directs ultrasonic signals toward an internal structure in the heart to create an ultrasonic image, and the electrode (300, 304, 334, 394) is arranged for electrical contact with the internal structure. A chemical ablation device (55, 86, 314, 396) mounted on the catheter (6) ablates at least a portion of the internal structure by delivery of fluid to the internal structure. The ablation device (55) may include a material that vibrates in response to electrical excitation, the ablation being at least assisted by vibration of the material. The ablation device may alternatively be a transducer (414) incorporated into the catheter (6), arranged to convert electrical signals into radiation and to direct the radiation toward the internal structure. The electrode may be a sonolucent structure (304, 334) incorporated into the catheter (6).

File 348:EUROPEAN PATENTS 1978-2002/Jan W04

File 349:PCT FULLTEXT 1983-2002/UB=20020124,UT=20020117

Set	Items	Description
S1	12421	BALLOON
S2	24361	CATHETER?
S3	696	CORONARY() SINUS
S4	496	CORONARY() VESSELS
S5	12549	MYOCARDI??
S6	245963	COLLECT???
S7	359127	WITHDRAW???
S8	51015	EVACUAT???
S9	539934	REMOV???
S10	48994	SUCTION????
S11	24499	RECIRCULAT???
S12	234755	RETURN???
S13	75119	DRAIN???
S14	67	S1(5N) S2(S) S3
S15	913724	S6:S10 OR S13
S16	30	S14(S) S15
S17	30	IDPAT (sorted in duplicate/non-duplicate order)
S18	30	IDPAT (primary/non-duplicate records only)

9/7/5 (Item 5 from file: 5)

DIALOG(R) File 5:BIOSIS Previews(R)

(c) 2002 BIOSIS. All rts. reserv.

11161872 BIOSIS NO.: 199799783017

Circulation reactions during acute myocardial ischemia in dogs with experimental diabetes mellitus.

AUTHOR: Neshcheret O P; Shepelenko I V; Okhrimenko N V; Honchar I V; Khomazyuk A I

AUTHOR ADDRESS: V.P. Komisarenko Inst. Endocrinol. Metab., Acad. Med. Sci. Ukr., Kiev**Ukraine

JOURNAL: Fiziologichnyi Zhurnal (Kiev) 43 (1-2):p70-77 1997

RECORD TYPE: Abstract

LANGUAGE: Ukrainian; Non-English

SUMMARY LANGUAGE: Russian; English

ABSTRACT: On alloxane-diabetic dogs under chloralose anaesthesia without opening the chest catheterization, extracorporeal perfusion and resistography of coronary arteries, catheterization and continuous drainage of coronary sinus, catheterization of major vessels and

heart chambers were performed. Acute myocardial ischemia was induced by the 60 s cessation of left circumflex coronary artery extracorporeal perfusion. The magnitude and peculiarity of the systemic circulation reactions during acute myocardial ischemia in dogs with moderate and mild hyperglycemia (less than 12 mmol/l) didn't differ from those in control group. But the degrees of coronary arteries dilation in the ischemic area and coronary sinus blood oxygen saturation reduction were less and the velocity of the coronary arteries resistance recovery to the base level in reperfusion period was more in these animals than in healthy dogs. In severe alloxane diabetes (hyperglycemia more than 12 mmol/l) the reflectory components of circulation reactions during myocardial ischemia, namely heart contractility function decrease, bradycardia, peripheral vessels resistance and arterial blood pressure reduction, were weakened or even absent, but the recovery velocity of cardiohemodynamic parameters and the level of metabolic processes in myocardium was significantly lowered in the reperfusion period.

9/7/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
09293090 97194003 PMID: 9041581
Paediatric cardiac arrest during Hickman line insertion.
Bass SP; Young AE
Great Ormond Street Hospital for Children, NHS Trust, London, UK.
Paediatric anaesthesia (FRANCE) 1997, 7 (1) p83-6, ISSN 1155-5645
Journal Code: CG8

Languages: ENGLISH
Document type: Journal Article
Record type: Completed
We report a case of four-year-old girl who suffered a cardiac arrest under anaesthesia, due to complete heart block without ventricular escape, during the flushing of an errantly placed longterm central venous catheter. It was subsequently found that the central line was placed in a persistent left superior vena cava (LSVC) draining directly into the coronary sinus. Diagnosis was suspected by a chest x-ray and confirmed by two-dimensional echocardiography. The patient made a complete recovery from the event and was discharged from hospital three days later.
Record Date Created: 19970508

9/7/7 (Item 7 from file: 94)
DIALOG(R)File 94:JICST-EPlus
(c)2002 Japan Science and Tech Corp(JST). All rts. reserv.
03445495 JICST ACCESSION NUMBER: 98A0097128 FILE SEGMENT: JICST-E
Clinical study on atrial natriuretic peptide in pediatric patients with various heart diseases: correlation with hemodynamic variables.
MATSUBARA TOORU (1); YONESAKA SUSUMU (1); YOKOYAMA MASARU (1)
(1) Hirosaki Univ.; Sch. of Med.
Hirosaki Igaku(Hirosaki Medical Journal), 1997, VOL.49,NO.1, PAGE.28-38,
FIG.7, TBL.1, REF.20
JOURNAL NUMBER: F0651AAB ISSN NO: 0439-1721 CODEN: HIRIA
UNIVERSAL DECIMAL CLASSIFICATION: 616.11/.16 616-053.2-039
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: In order to make clear the relationship between concentration of plasma .ALPHA.-hANP and hemodynamic parameters, blood samples were

collected during the routine cardiac catheterization at various heart sites in 69 patients with congenital heart diseases, and 41 patients of Kawasaki disease. The concentration of plasma .ALPHA.-hANP showed positive correlation with cardio-thoracic ratio, pulmonary-to-systemic flow ratio, and pulmonary-to-systemic pressure ratio in the patients with congenital heart diseases who had left to right shunts. On the contrary, there was no such correlation in the patients with cyanotic heart disease. The concentration of plasma .ALPHA.-hANP revealed positive correlation with severity of congestive heart failure. The concentration of plasma .ALPHA.-hANP in the aorta had strong correlation with the hemodynamic parameters in the patients with mild to moderate degree of congestive heart failure. From the clinical view point, it seemed that .ALPHA.-hANP value in the arterial blood is useful for the estimation of congestive heart failure, **because blood collection from coronary sinus is much limited.** (author abst.)

9/7/10 (Item 10 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
08395589 95347493 < PMID: 7621952
[The effect of insulin on cardiac activity and on the **coronary** and systemic circulations]
Vplyv insulynu na diial'nist' sertsia, vintsevyi ta systemnyi krovoobih.
Khomaziuk AI; Neshcheret OP; Shepelenko IV
Fiziologichnyi zhurnal (UKRAINE) May-Aug 1994, 40 (3-4) p3-9,
Journal Code: CIT
Languages: UKRAINIAN
Document type: Journal Article
Record type: Completed

The studies were performed on healthy closed-chest chloralose-anaesthetized dogs using catheterization, extracorporeal perfusion and resistography of coronary arteries and catheterization and continuous drainage of the **coronary sinus**. Insulin (0.1 and 1.0 IU/kg, i.v.) injected to healthy animals produced dose-dependent biphasic cardiohaemodynamic reactions. The first phase of the reaction includes transient (5-10 min) cardiac function strengthening, **coronary** arteries constriction, heart rate acceleration, myocardial oxygen consumption elevation, **coronary sinus** blood pH elevation and pO2 decrease. After that there arises more prolonged and constant dilation of **coronary** arteries reduction of the cardiac function, slowing of the heart rate, lowering of the myocardial oxygen consumption, decrease of cardiac venous blood pH and increase of pO2, reduction of T waves magnitude and ST segments shifts both in standard and breast leads. The second phase of the reaction is either attenuated or even absent after blockade of beta-adrenoceptors (propranolol, 0.5 mg/kg, i.v.). The results indicate that insulin effects on cardiohaemodynamics are realized through the interaction between insulin and heart and vessels of the adrenergic system.

Record Date Created: 19950831

9/7/14 (Item 14 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
07574620 92174309 PMID: 1541009
Improved detection of ischemia-induced increases in coronary sinus adenosine in patients with coronary artery disease.
Feldman MD; Ayers CR; Lehman MR; Taylor HE; Gordon VL; Sabia PJ; Ras D; Skalak TC; Linden J
Department of Internal Medicine, University of Virginia Health Sciences

Center, Charlottesville 22908.

Clinical chemistry (UNITED STATES) Feb 1992, 38 (2) p256-62, ISSN
0009-9147 Journal Code: DBZ

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Attempts to monitor **coronary sinus** adenosine as a clinical marker of myocardial ischemia in humans have been disappointing. **Accordingly, procedures have been developed for detecting adenosine in blood collected from the human coronary sinus.** Collection involves using a double-lumen metabolic catheter, which allows blood to be mixed with a stop solution at the catheter tip, thereby minimizing adenosine formation and degradation. A five-component stop solution almost completely arrests adenosine formation and degradation. Adenosine analysis is improved by using both boronate and C18 Sep-Pak columns to purify and concentrate adenosine in human plasma before HPLC. Plasma adenosine in the **coronary sinus** of patients with and without **coronary** artery disease, measured before and during peak atrial pacing, showed a twofold atrial pacing-induced increase in adenosine in the patients with **coronary** artery disease ($n = 9$, P less than 0.001) but no change in the patients with normal epicardial **coronary** arteries ($n = 6$). These preliminary results indicate that **coronary sinus** adenosine may provide an index of myocardial ischemia in patients with **coronary** artery disease.

Record Date Created: 19920403

10/7/4 (Item 4 from file: 155).

DIALOG(R) File 155:MEDLINE(R)

05779848 88109862 PMID: 2827910

Adrenergic coronary vasoconstriction helps maintain uniform transmural blood flow distribution during exercise.

Huang AH; Feigl EO

Department of Physiology and Biophysics, University of Washington, Seattle 98195.

Circulation research (UNITED STATES) Feb 1988, 62 (2) p286-98,
ISSN 0009-7330 Journal Code: DAJ

Contract/Grant No.: HL 16910, HL, NHLBI; HL-07090, HL, NHLBI

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

The hypothesis that alpha-adrenergic **coronary** vasoconstriction helps maintain a uniform transmural distribution of myocardial blood flow during exercise was tested in dogs. Carotid artery loops were surgically constructed and a splenectomy performed three weeks prior to study. On the day of study, the dog was anesthetized briefly (fentanyl and nitrous oxide) for percutaneous catheterization, and alpha-receptors in one myocardial region were blocked with phenoxybenzamine (0.25 mg/kg) infused selectively into the left circumflex **coronary** artery. **Recirculation of phenoxybenzamine was minimized by drainage of coronary sinus outflow during the infusion.** After the dog recovered from the anesthesia, regional blood flow was measured at rest and during graded treadmill exercise with the microsphere technique calibrated by reference blood samples. Average transmural flow was limited by alpha-vasoconstriction and was less in the region where alpha-receptors were intact than in the region where they were blocked, as has been described by others. The ratio of inner layer myocardial blood flow to outer layer flow was better maintained in the region with alpha-receptors intact than in the region with alpha-receptors blocked when myocardial oxygen consumption was 150 microliter/min/g or

greater (p less than 0.001). Even though average transmural flow was limited by alpha-receptor activation, inner layer myocardial blood flow was greater in the region with alpha-receptors intact than in the region with alpha-receptors blocked when myocardial oxygen consumption was 500 microliter/min/g or more (p less than 0.05). In conclusion, adrenergic **coronary** vasoconstriction mediated by alpha-receptors helps to maintain a uniform transmural distribution of myocardial blood flow during exercise in spite of limiting average transmural flow.

Record Date Created: 19880310

10/7/10 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online
(c) 2002 ProQuest Info&Learning. All rts. reserv.
0956778 ORDER NO: AAD87-13369
MAINTENANCE OF A UNIFORM TRANSMURAL DISTRIBUTION OF **CORONARY** BLOOD FLOW BY
ADRENERGIC VASOCONSTRICTION DURING EXERCISE

Author: HUANG, ALICE HSI

Degree: PH.D.

Year: 1987

Corporate Source/Institution: UNIVERSITY OF WASHINGTON (0250)

Source: VOLUME 48/03-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 672. 159 PAGES

The hypothesis that alpha-adrenergic **coronary** vasoconstriction helps keep the distribution of myocardial blood flow transmurally uniform during exercise was tested in dogs prepared with preliminary splenectomy and surgery to construct carotid artery loops. On the day of study, the dog was anesthetized briefly for percutaneous catheterization, and alpha receptors in one myocardial region were blocked with phenoxybenzamine (0.25 mg/kg) infused selectively into the left circumflex **coronary** artery.

Recirculation of phenoxybenzamine and contamination of other myocardial regions were minimized by drainage of coronary sinus outflow during the infusion. After the dog recovered from the anesthesia regional blood flow was measured, at rest and during graded treadmill running, with the microsphere technique calibrated by reference blood samples. Average transmural flow was limited by alpha-vasoconstriction, and was less where alpha receptors were intact than where they were blocked, as described by others. In spite of average transmural flow being limited, inner myocardial flow was significantly greater ($P < 0.05$ at myocardial oxygen consumption greater than 500 (μ l O₂/min/g) and the ratio of inner myocardial flow to outer (I/O) was significantly better maintained ($P < 0.001$ at myocardial oxygen consumption greater than 150 (μ l O₂/min/g) in the region with alpha receptors intact than in that with alpha receptors blocked.

Experiments in which vehicle alone was infused (alpha receptors intact in both regions) showed that blockade of alpha receptors in the circumflex region actually reversed the difference in I/O ratios present between the two myocardial regions under control conditions. Experiments in which beta receptors in both myocardial regions were blocked (in addition to alpha receptors in the circumflex region being blocked), and analyses allowing for regional difference in metabolism secondary to blockade of prejunctional alpha receptors in the circumflex region, indicate that these observations are attributable, at least in part, to blockade, by phenoxybenzamine, of postjunctional alpha receptors involved in **coronary** vasoconstriction. In conclusion, alpha-adrenergic activation during exercise helps to enhance inner myocardial flow and maintain a uniform transmural distribution of myocardial blood flow, in spite of its effect of limiting average transmural flow.

File 155:MEDLINE(R) 1966-2002/Jan W1
 File 5:Biosis Previews(R) 1969-2002/Jan W3
 File 34:SciSearch(R) Cited Ref Sci 1990-2002/Jan W4
 File 35:Dissertation Abs Online 1861-2002/Jan
 File 71:ELSEVIER BIOBASE 1994-2002/Jan W4
 File 73:EMBASE 1974-2002/Jan W3
 File 88:Gale Group Business A.R.T.S. 1976-2002/Jan 30
 File 94:JICST-EPlus 1985-2002/Dec W3
 File 144:Pascal 1973-2002/Jan W4
 File 156:ToxFile 1966-2001/Oct W3
 File 158:DIOGENES(R) 1976-2002/Jan W4
 File 159:Cancerlit 1975-2001/Oct
 File 198:Health Devices Alerts(R) 1977-2002/Jan W4
 Set Items Description
 S1 84 CATHETER? (S) (COLLECT??? OR DRAIN??? OR EVACUAT??? OR REM-
 OV??? OR SUCTION???) (3W) CORONARY() SINUS
 S2 50 RD (unique items)
 S3 0 S2/2002 OR S2/2001 OR S2/2000
 S4 50 Sort S2/ALL/PY,D
 S5 243702 BALLOON
 S6 3 S4/ AND S5
 S7 327418 CATHETER?/TI,DE OR CORONARY() SINUS/TI,DE
 S8 30 (S7 AND S2) NOT S6
 S9 30 Sort S8/ALL/PY,D
 S10 17 S2 NOT (S6 OR S9)

3/3,AB,K/2 (Item 2 from file: 149)
 DIALOG(R)File 149:TGG Health&Wellness DB(SM)
 (c) 2002 The Gale Group. All rts. reserv.
 01789469 SUPPLIER NUMBER: 20485055 (USE FORMAT 7 OR 9 FOR FULL TEXT)
 Advances in myocardial protection.(Cardiac Surgery, Part 1: Acute Care)
 Seifert, Patricia C.
 Journal of Cardiovascular Nursing, v12, n3, p29(10)
 April, 1998
 PUBLICATION FORMAT: Magazine/Journal ISSN: 0889-4655 LANGUAGE: English
 RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional
 WORD COUNT: 4414 LINE COUNT: 00398
 ABSTRACT: Advances are being made in myocardial protection as minimally
 invasive methods expand surgical options. Success of cardiac surgery is due
 to a great extent to the myocardial protection techniques used to maintain
 cardiac viability during the period of induced ischemic arrest. As the
 number of older, high-risk cardiac surgical patients increases, it has
 become important to have advances in myocardial protection that make a
 quiet bloodless operative field with no irreversible intraoperative
 myocardial damage possible.
 ... those areas in the myocardium inadequately perfused via the
 antegrade route.
 Unlike antegrade effluent, which drains mainly into the coronary
 sinus and the right atrium, retrograde effluent that exits via the
 coronary ostia into the aortic root must be actively removed to avoid
 myocardial and aortic distension. A suction/vent catheter is placed in
 the aorta (below the cross-clamp) for the purpose of removing the effluent.
 The vent catheter is also used to suction away atheromatous debris and/

or air bubbles in the **coronary...**

3/3,AB,K/3 (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.
05877263 SUPPLIER NUMBER: 11956688 (USE FORMAT 7 OR 9 FOR FULL TEXT)
An investigator's journey in cardiology. (In Retrospect)
Bing, Richard J.
JAMA, The Journal of the American Medical Association, v267, n7, p969(4)
Feb 19, 1992
ISSN: 0098-7484 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 4251 LINE COUNT: 00337
... me, in 1945, to study the nutrition of the human heart in situ
through the collection of coronary sinus blood by means of
catheterization....

File 467:ExtraMED(tm) 2000/Dec
File 148:Gale Group Trade & Industry DB 1976-2002/Jan 30
File 149:TGG Health&Wellness DB(SM) 1976-2002/Jan W3
File 442:AMA Journals 1982-2002/Feb B2
File 444:New England Journal of Med. 1985-2002/Jan W4
File 636:Gale Group Newsletter DB(TM) 1987-2002/Jan 30
Set Items Description
S1 9 CATHETER? (S) (COLLECT??? OR DRAIN??? OR EVACUAT??? OR REM-
OV??? OR SUCTION???) (3W) CORONARY () SINUS
S2 7 RD (unique items)
S3 7 Sort S2/ALL/PD,D

File 351:Derwent WPI 1963-2001/UD,UM &UP=200206
File 344:CHINESE PATENTS ABS APR 1985-2001/Dec
File 347:JAPIO OCT 1976-2001/Sep(UPDATED 020102)
File 371:French Patents 1961-2002/BOPI 200204
Set Items Description
S1 0 CATHETER? (S) (COLLECT??? OR DRAIN??? OR EVACUAT??? OR REM-
OV??? OR SUCTION???) (3W) CORONARY () SINUS

3/3,AB,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2002 European Patent Office. All rts. reserv.
00339160
Catheter for retroinfusion of pharmacological agents.
Katheter fur Ruckinfusion von pharmazeutischen Agenzien.
Catheter pour retro-infusion d'agents pharmaceutiques.
PATENT ASSIGNEE:
Corday, Eliot, Dr., (1129410), 810 North Roxbury, Beverly Hills
California 90210, (US), (applicant designated states: DE;FR;GB;IT;SE)
INVENTOR:
Corday, Eliot, 810 North Roxbury, Beverly Hills California 90210, (US)
Meerbaum, Samuel, 5741 El Canon, Woodland Hills California 91364, (US)
LEGAL REPRESENTATIVE:
Brown, John David et al (28811), FORRESTER & BOEHMERT Widenmayerstrasse
4/I, D-8000 Munchen 22, (DE)

PATENT (CC, No, Kind, Date): EP 335205 A1 891004 (Basic)
APPLICATION (CC, No, Date): EP 89104838 850117;
PRIORITY (CC, No, Date): US 572411 840120
DESIGNATED STATES: DE; FR; GB; IT; SE
RELATED PARENT NUMBER(S) - PN (AN):
EP 150960

INTERNATIONAL PATENT CLASS: A61M-005/14;
ABSTRACT EP 335205 A1

An inflatable catheter and method of medical treatment in which the flexible balloon material stretches when inflated to produce an acorn-shaped balloon, the broadened base of which seals against the vein interfacing the **coronary sinus** orifice of the heart to allow for stoppage of the natural flow of blood in the vessel, and which facilitates anterograde controlled, synchronous retroinfusion of pharmacologic or angiographic agents into the myocardium. An inflated catheter and method of medical treatment in which the apex of the inflated acorn-shaped balloon tapers away from the walls of the **coronary sinus** to prevent blockage of fluid flow through the middle cardiac vein thereby preventing pressure build up and edema in the myocardium.

ABSTRACT WORD COUNT: 118

LANGUAGE (Publication, Procedural, Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	978
SPEC A	(English)	EPABF1	2946
Total word count - document A			3924
Total word count - document B			0
Total word count - documents A + B			3924

...SPECIFICATION facilitates the restoration of normal **coronary** venous drainage via the restoration of normal **coronary** venous drainage via the **coronary sinus** into the right atrium. As a result of the specially tapered configuration of the inflated...
...veins and prevent excessive regional **coronary** venous pressure buildup during retroinfusion. The uniquely shaped balloon catheter inserted into the appropriate coronary vein will then provide retroperfusion permitting as much absorption of...narrow tapered apex of the balloon prevents obstruction of the middle cardiac vein allowing thereby drainage of the **coronary sinus** 23 when the coronary venous pressure exceeds safe parameters.

When the catheter according to this...

...CLAIMS A1

1. A catheter apparatus for retroinfusion of fluids into the **coronary sinus** for treatment or diagnosis of the...
...sinus orifice and into the **coronary sinus** for delivery therethrough of pharmacologic fluids;
a balloon catheter material adapted for inflation and secured and sealed just proximally to the distal extension of...
...obstructing the middle cardiac vein to prevent pressure build up and edema and to facilitate drainage of the **coronary sinus** during cardiac systole;...

3/3,AB,K/7 (Item 7 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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00387056

LESS-INVASIVE DEVICES AND METHODS FOR CARDIAC VALVE SURGERY

DISPOSITIFS MOINS/ VULNERANTS DE CHIRURGIE DES VALVULES CARDIAQUES ET
PROCEDES ASSOCIES

Patent Applicant/Assignee:

HEARTPORT INC,

Inventor(s):

DONLON Brian S,
PETERS William S,
GARRISON Michi E,
ROSENMAN Daniel C,
STEVENS John H,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9727799 A1 19970807

Application: WO 97US1018 19970123 (PCT/WO US9701018)

Priority Application: US 96594870 19960131

Designated States: AU CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 24321

English Abstract

Systems and methods are disclosed for performing less invasive surgical procedures within the heart. A method for less invasive repair or replacement of a cardiac valve (216) comprises placing an instrument (290) through an intercostal access port (212) and through a penetration in a wall of a vessel in communication with the heart, advancing the instrument (290) into the heart, using the instrument (290) to perform a surgical intervention on a cardiac valve (216) in the heart under visualization through an intercostal access port. The surgeons hands are kept outside of the chest during each step. The surgical intervention may comprise replacing the cardiac valve with a prosthetic valve, wherein the native valve is removed using a tissue removal instrument (206), the native valve annulus is sized with a specialized sizing device (216), a prosthetic valve is introduced through an intercostal access port (212) and through the penetration in the vessel, and the prosthetic valve is secured at the native valve position, all using instruments positioned through intercostal access ports without placing the hands inside the chest. Systems and devices for performing these procedures are also disclosed.

Detailed Description

... In a preferred technique, after an initial infusion of cardioplegic fluid through endoaortic catheter 32 to induce cardioplegic arrest, most subsequent infusions are performed retrograde through coronary sinus catheter 52. To maintain cardioplegic arrest, cardioplegic fluid is preferably delivered in periodic infusions at, for...

...to 180 seconds at 15 minute intervals. Between infusions, expandable member 58 of coronary sinus catheter 52 is preferably deflated to allow fluid to drain from the coronary sinus.

In an alternative technique for inducing cardioplegic arrest, devices are introduced thoracoscopically through access ports...

3/3,AB,K/12 (Item 12 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00115502

AUTOINFLATABLE CATHETER

CATHETER AUTO-GONFLABLE

Patent Applicant/Assignee:

WEBSTER Wilton W Jr,

Inventor(s):

WEBSTER Wilton W Jr,

Patent and Priority Information (Country, Number, Date):

Patent: WO 8303204 A1 19830929

Application: WO 82US319 19820312 (PCT/WO US8200319)

Priority Application: WO 82US319 19820312

Designated States: AT AT AU BE BR CF CG CH CH CM DE DE DK FI FR GA GB GB HU
JP KP LU LU MC MG MW NL NL NO RO SE SE SN SU TD TG US

Publication Language: English

Fulltext Word Count: 4778

English Abstract

A balloon support (13) connecting two sections of a catheter tube (11 and 12). The balloon support (13) forms a rigid cage having an unobstructed pathway between the two catheter tube sections. The cage comprises openings (25) forming passages between the interior of the cage and a balloon chamber (22) formed between the cage and a balloon (14) surrounding the cage. The passages are sufficiently large not to significantly restrict the flow of a liquid through the passages and to substantially prevent pooling of liquid in the balloon chamber (22).

Detailed Description

... that the catheter balloon is positioned in the **coronary sinus**.

The posterior end of the catheter is attached to the pulsatile Pumpe

Oxygenated blood flow from the puncture artery through the...

...and tube to the pulsatile pump and is then delivered pulsatilely during diastole through the catheter to the **coronary sinus**. A portion of the blood flowing through the catheter inflates the balloon, thereby blocking a portion of the **coronary sinus**. The remainder of the oxygenated blood flows through the catheter into the **coronary sinus** where it retroperfuses into the myocardium, thereby providing at least a...

...been cut off from the **coronary** arteries. During systole, blood is not pumped through the catheter and the balloon deflates thus allowing deoxygenated venous blood to drain through the **coronary sinus**.

A preferred embodiment of an autoinflatable catheter, used in the retroperfusion of blood to the...

File 348:EUROPEAN PATENTS 1978-2002/Jan W04

File 349:PCT FULLTEXT 1983-2002/UB=20020124,UT=20020117

Set Items Description

S1 12 CATHETER? (S) (COLLECT??? OR DRAIN??? OR EVACUAT??? OR REM-
OV??? OR SUCTION???) (3W) CORONARY() SINUS
S2 12 IDPAT (sorted in duplicate/non-duplicate order)
S3 12 IDPAT (primary/non-duplicate records only)

TITLES and KWIC FORMAT ONLY
JANUARY 30, 2002

1/6/8 (Item 8 from file: 348)
00888431
IMPROVED TROCAR

1/6/14 (Item 6 from file: 349)
00392777 **Image available**
IMPROVED TROCAR
Publication Year: 1997

17/6/4 (Item 4 from file: 155) *duplicate*
10826492 20465509 PMID: 11009474
Protein washdown as a defense mechanism against myocardial edema.
Oct 2000

17/6/6 (Item 6 from file: 155)
09791956 98307823 PMID: 9645891
Cardiac release and kinetics of endothelin after uncomplicated
percutaneous transluminal **coronary** angioplasty.
Jun 15 1998

17/6/10 (Item 10 from file: 155)
08741377 96021206 PMID: 7572578
Acute changes in atrial natriuretic peptide, insulin-like growth
factor-1, and lactate levels during left anterior descending **coronary**
artery angioplasty.
Oct 1995

17/6/19 (Item 19 from file: 155)
06604656 88200523 PMID: 3361691
Experimental study of acute **coronary sinus** thrombosis--clinical
references to **coronary sinus** thrombosis and **coronary** venography.
Jan 1988

17/6/21 (Item 21 from file: 155)
05843652 88223726 PMID: 3370777
Effect of pressure-controlled intermittent **coronary sinus** occlusion
on pacing-induced myocardial ischemia in domestic swine.
Jun 1988

17/6/23 (Item 23 from file: 155)
05205912 89029066 PMID: 3180401
Improved protection of chronically inflow-limited myocardium with
retrograde **coronary sinus** cardioplegia.
Nov 1988

17/6/24 (Item 24 from file: 155)
05695288 87299285 PMID: 2956980
Coronary sinus pH during percutaneous transluminal **coronary** angioplasty:
early development of acidosis during myocardial ischaemia in man.
Aug 1987

17/6/25 (Item 25 from file: 155)
03866688 84279186 PMID: 6465990

A comparison of retrograde cardioplegia versus antegrade cardioplegia in the presence of **coronary** artery obstruction.
Aug 1984

21/6,K/1 (Item 1 from file: 155)
DIALOG(R)File 155:
10605446 20198331 PMID: 10731434

Myocardial oxygen consumption modulates adenosine formation by canine right ventricle in absence of hypoxia.
Mar 2000

Myocardial adenosine formation varies with myocardial oxygen consumption (MVO(2)), but whether concurrent hypoxia is required for adenosine formation is uncertain...

...2)and in RC venous P O(2) (P(v)O(2)), an index of myocardial P O(2). RCP was varied in 10 anesthetized, open chest dogs to determine if, under these conditions, RV formation of adenosine would increase with MVO(2) in absence of myocardial hypoxia. **Dialysis probes were implanted in the mid myocardium of RV free wall for collecting dialysate samples for HPLC analyses to estimate interstitial adenosine and other purines. Coronary venous blood...**

...dialysate adenosine had fallen. When RCP was elevated to 164+/-2 mmHg by inflating a **balloon catheter** in the descending aorta, RCBF increased to 0.70+/-0.06 ml/min/g, MVO...

... indicate that (1) RV oxygen demand varies with RCP; (2) if RV ischemia is absent, myocardial adenosine formation is modulated by MVO(2), with no requirement for hypoxia; (3) pressure-flow...

Descriptors: Adenosine--biosynthesis--BI; * Myocardium --metabolism--ME; *Oxygen Consumption--physiology--PH

21/6,K/3 (Item 3 from file: 155)
DIALOG(R)File 155:
06697693 91167384 PMID: 2076380

The effects of oral pretreatment with zofenopril, an angiotensin-converting enzyme inhibitor, on early reperfusion and subsequent electrophysiologic stability in the pig.
Jun 1990

... on the 2 days prior to ischemia, which was evoked by the inflation of a **catheter balloon** in the left anterior descending **coronary** artery over 45 minutes. The **catheter** was then **removed** and the myocardium was reperfused. After 2 weeks, infarct properties were assessed by signal averaging of the body...

21/6,K/6 (Item 1 from file: 94)
DIALOG(R)File 94:(c)2002 Japan Science and Tech Corp(JST). All rts.reserv.
01953434 JICST ACCESSION NUMBER: 94A0092422 FILE SEGMENT: JICST-E
Preservation of high **coronary** flow at the epicardial rim during **coronary** occlusion in dogs., 1993

ABSTRACT: To clarify the mechanism why the myocardium at the epicardial rim can survive in transmural myocardial infarction, we **measured regional myocardial blood flow (Qm) during coronary occlusion in 12 closed-chest dogs. The left anterior descending coronary artery was occluded by a balloon catheter and non-radioactive colored microspheres were injected into the left atrium before and after coronary occlusion. The occluded myocardium was removed and sliced at a thickness of 0.5mm from the epicardial surface to the endocardium. Qm measured 5sec after occlusion amounted 74.8.+-.8.8% of control at**

the myocardium of 0.5mm in depth from the epicardial surface. At the myocardium with the depth of 10% of total thickness, Qm was 62.3.+-.7.1%; at...

16/6,K/2 (Item 1 from file: 16)
DIALOG(R)File 16:(c) 2002 The Gale Group. All rts. reserv.
07733560 Supplier Number: 64464314 (USE FORMAT 7 FOR FULLTEXT)
Cardima Enters Congestive Heart Failure Market.
August 23, 2000
Word Count: 327
... will incorporate Cardima's deflatable Naviport(TM) hollow lumen guiding **catheter** and patented Vueport(TM) **balloon** technology in one **catheter** designed to allow surgeons to place pacemaker leads in the coronary sinus...

6/6,K/1 (Item 1 from file: 155)
DIALOG(R)File 155:
05648649 87155752 PMID: 3103575
[Double superior vena cava with **drainage** of the right superior vena cava into the left auricle. Presentation as a cerebral abscess in an adult]
Oct 1986
... double abnormality of the systemic venous **drainage**: presence of an abnormal left superior vena cava **draining** into the **coronary sinus** and of a right superior vena cava **draining** into the left atrium. These two vena cava intercommunicated by anastomoses. Angiography in the right superior vena cava after occlusion by **balloon catheter** at its junction with the left atrium showed flow from the right to the left...
...one on the right **draining** into the left atrium and the other on the left **draining** into the **coronary sinus**, with anastomoses between the two superior vena cavae. This double abnormality of systemic venous **drainage**...

6/6,K/1 (Item 1 from file: 636)
DIALOG(R)File 636:(c) 2002 The Gale Group. All rts. reserv.
03962458 Supplier Number: 50341463 (USE FORMAT 7 FOR FULLTEXT)
PRODUCT BRIEFS: FDA okays 1/3-size cochlear implant
August 1, 1998
Word Count: 2356
TEXT:
...a patient suffer cardiac arrest. * Cardima (Fremont, California) has received FDA approval for its Vueport **balloon** occlusion guiding **catheter**, a **balloon catheter** with a compliant bal-loon on its distal tip designed to allow access and enhance...
...venous system for mapping of ventricular tachycardia. **The device is designed to temporarily occlude the coronary sinus, which is the main draining blood vessel in the heart, allowing the physician to inject radiopaque dye which shows the...**

19/26,TI,K/1 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
014098407
WPI Acc No: 2001-582621/200165
By-passing an artery block involves introducing covered stent through artery to blocking through formed connections, and fixing proximal and distal ends of covered stent within artery
Abstract (Basic):
... in the artery distal to the blocking. An INDEPENDENT CLAIM is

also included for the **catheter** system used in by-passing the blocking in an artery...
...occlusion in an artery. Ensures easy access to the venous system of the heart since **coronary sinus**, which is the end point of the venous **drainage** from the heart, is easily accessible in the right atrium. Uses wide vein as medium...
...blocking flow in the vein. Uses properly aligned magnets or electromagnets that eliminate need of **balloon** for anchoring during creation of first and second connections...
...The figure shows one position of the flap device of the first **catheter** used in by-passing an artery block...

19/26, TI, K/2 (Item 2 from file: 351)
DIALOG(R) File 351: Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
013377567

WPI Acc No: 2000-549505/200050

Cardiac lead insertion apparatus in vasculature of heart, has primary lumen connected to primary port to pass guide wire, and secondary lumen connected to inflatable **balloon** to temporarily close **coronary sinus**
... lumen connected to primary port to pass guide wire, and secondary lumen connected to inflatable **balloon** to temporarily close **coronary sinus**

Abstract (Basic):

... An inflatable **balloon** (44) which when inflated, temporarily closes the **coronary sinus**. A guide wire (10) is passed via a primary port to a primary lumen (38) of the tube. A sleeve (20) is passed over the **catheter** until far end (24) of the sleeve reaches the **sinus**, configured to be left in place during retraction of guide **catheter** and **removed** once lead is inserted in its proper position through sleeve.

... A secondary lumen (42) of a tube (32) of a guide **catheter** (30) is linked to an inflatable **balloon** (44). The guide wire is passed outwards through an orifice (40) which is located at...

19/26, TI, K/3 (Item 3 from file: 351)
DIALOG(R) File 351: Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
013099404

WPI Acc No: 2000-271276/200023

Delivering nucleic acids to cardiac tissue used in gene therapy particularly for treating **coronary** heart disease

Abstract (Basic):

Technology Focus:

... The nucleic acid is expressed. Inserting the nucleic acid comprises injecting it, preferably through a **catheter** and delivery preferably includes increasing the vessel permeability, changing a predetermined volume of nucleic acid...

19/26, TI, K/5 (Item 5 from file: 351)
DIALOG(R) File 351: Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
012103098

WPI Acc No: 1998-520010/199844

Balloon catheter suitable for e.g. **coronary sinus** insertion including venting, and fluid delivery lumen obturation - prevents unnecessary

loss of blood and potential hazard to personnel during insertion, whilst minimising both insertion force required and trauma to tissue

...Abstract (Basic): This new **catheter** has a fluid-delivery lumen open at the near end and extending through its length. The far end of the **catheter** is passed through a bodily orifice and has an external inflatable section (30). A discharge...

...insertion of the far end into the orifice, and a released condition permitting flow on **removing** the obturator from the fluid delivery lumen. A vent in the **catheter** or introducer, near the obturator, connects the **balloon** to atmosphere, permitting air to be exhausted, during insertion of the far end into the...

...USE - A **balloon catheter** for e.g. insertion into the **coronary sinus** ...

...ADVANTAGE - This **balloon catheter** remedies omissions of prior art, in providing occlusion of the outlet at the far end during insertion into the **coronary sinus**, to prevent or restrict blood flow into the **catheter** lumen whilst simultaneously venting the **balloon**. Venting the **balloon** minimises insertion force and resultant tissue trauma. A variety of suitable obturator and vent combinations

19/26, TI, K/6 (Item 6 from file: 351)
DIALOG(R) File 351: Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
011981918
WPI Acc No: 1998-398828/199834

Balloon catheter for **coronary** bypass surgery - has a spring to prevent inadvertent adhesion of silicone **balloon** interior surface to silicone **catheter** body exterior surface

...Abstract (Basic): **Catheter** (12) has a **catheter** body (14) having an exterior surface (38), proximal end (16), distal ends (18) and a first lumen (26) extending through at least a portion of the **catheter** body (14). Inflatable member or **balloon** (20) is mounted to the exterior surface (38) fluidly connected to the first lumen (26)...

...between an expanded state and a retracted state. A spring (40) is mounted on the **catheter** body exterior surface (38) intermediate the proximal and distal ends (22, 24) of **balloon** (20). Spring (40) is adapted to prevent inadvertent adhesion of the **balloon** interior surface to the **catheter** body exterior surface (38)...

...Preferably **catheter** body (14) and **balloon** (20) are formed from silicone and the spring (40) is formed from a material other than silicone. Preferably **balloon** (20) includes adhesive prevention which is a liquid lubricant that is preferably silicone oil, glycerin, polyvinylpyrrolidone or polydimethyl siloxane. Preferably **balloon** (20) is formed of an elastic material...

...USE - **Catheter** for use in **coronary** bypass surgery positioned externally of the heart and adapted to assist in the retention of a retrograde cardioplegia solution **catheter** in the **coronary sinus**. The **catheter** has a mechanism to prevent the sticking of the **balloon** to the **catheter**. **Catheter** for use in the retrograde administration of cardioplegia solution to a heart (claimed)...

...ADVANTAGE - The possibility of the inadvertent sticking of the **balloon** to the **catheter** body during inflation is minimised. Inadvertent **removal** of the retrograde cardioplegia solution perfusion **catheter** for the administration of cardioplegia solution is minimised, and any undesirable **draining** of cardioplegia solution from the middle and small cardiac veins back into the right atrium is also minimised upon

inflation of the properly positioned **balloon catheter** . These benefits are achieved without any additional trauma to the heart than that which is...

19/26, TI, K/8 (Item 8 from file: 351)
DIALOG(R) File 351: Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
011423779
WPI Acc No: 1997-401686/199737

Cardioplegia **catheter** having **balloon** for better retention within bodily vessel or cavity - includes infusion lumen within body and radially expandable seal surrounding body proximally of outlet, this seal having retention members adapted to enhance purchase between vessel wall and seal

...Abstract (Basic): The **catheter** includes a body receivable in **coronary sinus** vein by way of an orifice in the **coronary sinus** vein opening into a heart chamber. There is an infusion lumen having outlet at distal...
...so that at least a portion of the exterior surface engages the wall of the **coronary sinus** to form a seal closing the orifice...
...integrally formed on the exterior surface of the seal to enhance the purchase between the **coronary sinus** wall and the sealing member in the expanded state thereby increasing resistance to **removal** of the sealing member from the **coronary sinus** and loss of the seal...
...ADVANTAGE - Forms an effective seal with the wall of the **coronary sinus** and also retains the **balloon** securely in a position at or close to the exit of the **coronary sinus** .

19/26, TI, K/9 (Item 9 from file: 351)
DIALOG(R) File 351: Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
011008266
WPI Acc No: 1996-505216/199650

Steerable guide **catheter** for placement of electrical lead wires - has proximal hemostatic and is axially splittable for **removal** over lead wire with enlarged connector

...Abstract (Basic): The steerable guide **catheter** comprises a flexible tubular body having a proximal end, a distal end, an axial lumen...
...so that it may be manually separated along the at least one axial line. A **balloon** at the distal end of the flexible tubular body is attached to the flexible tubular...
...USE - For implanting cardiac pacemaker and defibrillation leads in heart and **coronary sinus** , for treatment of arrhythmias including both bradycardias and tachycardias...

19/26, TI, K/10 (Item 10 from file: 351)
DIALOG(R) File 351: Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
010618282
WPI Acc No: 1996-115235/199612

Balloon catheter with **balloon** surface retainer esp. for supplying perfusion liq. to bodily vessel - has infusion lumen for introducing perfusion liq. into heart, and includes radially expandable sealing member

...Abstract (Basic): The elongated flexible **catheter** comprises a body having a proximal end, a distal end receivable in a vessel by...
...end and the distal end. It has at least one infusion lumen outlet at the

catheter distal end for discharge of liquid from the lumen and a radially expandable sealing member...
...purchase between the vessel wall and the sealing member in the expanded state to resist **removal** of the distal end from the vessel and loss of the seal...
...USE - Esp. for retrograde perfusion of the heart through the **coronary sinus**.

19/26, TI, K/11 (Item 11 from file: 351)
DIALOG(R) File 351: Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
010533400

WPI Acc No: 1996-030354/199603

Balloon catheter for retrograde perfusion of heart through **coronary sinus** - has infusion lumen introducing liquid into heart with retention member in form of **balloon** and retention enhancements in form of spikes, felt or hydrophilic coating

...Abstract (Basic): purchase between the vessel wall and the sealing member in the expanded state to resist **removal** of the distal end from the vessel and loss of the seal. Each spike has...
...ADVANTAGE - Forms an effective seal with the wall of the **coronary sinus** and also retains the **balloon** securely in a position at or close to the exit of the **coronary sinus**.

19/26, TI, K/13 (Item 13 from file: 351)
DIALOG(R) File 351: Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.
007259873

WPI Acc No: 1987-256880/198736

Retrograde delivery of fluid agents via venous circulation - for pharmacological or diagnostic purposes uses **catheter** with inflatable **balloon**

...Abstract (Basic): in a retrograde venous flow to a microcirculatory system in the patient's body. A **catheter** having an inflatable **balloon** at its distal end is inserted into a vein and is advanced to a position within the vein which **drains** the microcirculatory system. The **balloon** is inflated and the fluid is advanced through the **catheter** and vein into the system in a retrograde direction to normal flow. The fluid is...

...2 secs. at a pressure sufficient to deliver it to the desired location. Subsequently the **balloon** is deflated to allow the fluid to **drain** from the system in the direction of normal blood flow...

...USE - The **catheter** may be inserted into the patient's **coronary sinus** to instill the fluid to a microcirculatory system in the myocardium. The fluid may contain...

18/TI/1 (Item 1 from file: 348)
DIALOG(R) File 348: (c) 2002 European Patent Office. All rts. reserv.
Catheter for retroinfusion of pharmacological agents.

18/TI/2 (Item 2 from file: 348)
DIALOG(R) File 348: (c) 2002 European Patent Office. All rts. reserv.
Retroperfusion and retroinfusion control apparatus, system and method.

18/TI/3 (Item 3 from file: 348)
DIALOG(R) File 348: (c) 2002 European Patent Office. All rts. reserv.
Retroperfusion **catheter**.

18/TI/4 (Item 4 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
INTRALUMENAL VISUALIZATION SYSTEM WITH DEFLECTABLE MECHANISM

18/TI/5 (Item 5 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
METHODS AND KITS FOR LOCALLY ADMINISTERING AN ACTIVE AGENT TO AN
INTERSTITIAL SPACE OF A HOST

18/TI/6 (Item 6 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
METHOD AND APPARATUS FOR DIFFERENTIALLY PERFUSING A PATIENT DURING
CARDIOPULMONARY BYPASS

18/TI/12 (Item 12 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
CATHETER FLOW AND LATERAL MOVEMENT CONTROLLER

18/TI/13 (Item 13 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
COMPOSITIONS, APPARATUS AND METHODS FOR FACILITATING SURGICAL PROCEDURES

18/TI/15 (Item 15 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
ANTEGRADE CARDIOPLEGIA **CATHETER** AND METHOD

18/TI/17 (Item 17 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
METHOD FOR TREATING ISCHEMIC BRAIN STROKE

18/TI/24 (Item 24 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
RETROGRADE DELIVERY **CATHETER** AND METHOD FOR INDUCING CARDIOPLEGIC ARREST

18/TI/28 (Item 28 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
RETROGRADE VENOUS CARDIOPLEGIA **CATHETERS** AND METHODS OF USE AND MANUFACTURE

18/TI/29 (Item 29 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
RETROGRADE **CORONARY SINUS** PERFUSION DEVICE AND METHOD

18/TI/30 (Item 30 from file: 349)
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.
AUTOINFLATABLE **CATHETER**

4/6/2 (Item 2 from file: 158)
01265667 DIOGENES RECORD NUMBER: 1621870
MDR (MAUDE) REPORT: PARAGON HEALTHCARE CORP. DEFLECTABLE ORTHOGONAL
CATHETER MODEL 0D7-8X2D-005-FS - OTHER.

4/6/5 (Item 5 from file: 5)
11161872 BIOSIS NO.: 199799783017
Circulation reactions during acute myocardial ischemia in dogs with
experimental diabetes mellitus.

1997

4/6/6 (Item 6 from file: 155)
09350887 97303920 PMID: 9221122
[Circulatory changes in acute myocardial ischemia in dogs with experimental diabetes mellitus]
Zminy krovobihu pry hostrii ishemii miokarda u sobak z eksperymental'nym tsukrovym diabetom.
1997

4/6/8 (Item 8 from file: 94)
03445495 JICST ACCESSION NUMBER: 98A0097128 FILE SEGMENT: JICST-E
Clinical study on atrial natriuretic peptide in pediatric patients with various heart diseases: correlation with hemodynamic variables., 1997

4/6/9 (Item 9 from file: 144)
12809976 PASCAL No.: 97-0023686
Intermediate results of the extracardiac fontan procedure. Discussion
1996
Copyright (c) 1997 INIST-CNRS. All rights reserved.

4/6/12 (Item 12 from file: 155)
08395589 95347493 PMID: 7621952
[The effect of insulin on cardiac activity and on the **coronary** and systemic circulations]
Vplyv insulinu na diial'nist' sertsia, vintsevyi ta systemnyi krovoobih.
May-Aug 1994

4/6/13 (Item 13 from file: 155)
08267589 95033309 PMID: 7946419
Surgical repair of transposition of great arteries and total anomalous pulmonary venous return to the **coronary sinus** (TGA with TAPVR).
1994

4/6/14 (Item 14 from file: 155)
07993193 94116042 PMID: 8287457
Right **coronary** artery cirroid with fistulous connection to the **coronary sinus**.
Dec 1993

4/6/15 (Item 15 from file: 155)
07910781 93292434 PMID: 8513741
Total anomalous pulmonary venous **drainage**.
Feb 1993

4/6/16 (Item 16 from file: 94)
01895562 JICST ACCESSION NUMBER: 93A0502276 FILE SEGMENT: JICST-E
Persistent Left Superior Vena Cava., 1993

4/6/17 (Item 17 from file: 155)
07584856 92270984 PMID: 1589652
[A case of isolated tricuspid regurgitation associated with persistent left superior vena cava]
May 1992

4/6/18 (Item 18 from file: 155)

07574620 92174309 PMID: 1541009

Improved detection of ischemia-induced increases in **coronary sinus** adenosine in patients with **coronary** artery disease.
Feb 1992

4/6/19 (Item 19 from file: 155)
06973249 93008876 PMID: 1394926

Platelet hyperaggregability across the **coronary** bed in response to rapid atrial pacing in patients with stable **coronary** artery disease.
Oct 1992

4/6/20 (Item 20 from file: 73)
05278137 EMBASE No: 1993046222

Correction of transposition of the great arteries accompanied by partial form of atrioventricular canal and tricuspid insufficiency. Description of a case
1992

4/6/21 (Item 21 from file: 88)
02919379 SUPPLIER NUMBER: 11956688

An investigator's journey in cardiology. (In Retrospect)
Feb 19, 1992
WORD COUNT: 4188 LINE COUNT: 00337

4/6/22 (Item 22 from file: 155)
06780831 92026876 PMID: 1928717

[The seated position in patent foramen ovale?]
Sitzende Position bei offenem Foramen ovale?
Jul 1991

4/6/23 (Item 23 from file: 34)
01116371 Genuine Article#: FX254 Number of References: 7

Title: THE SEATED POSITION, PATENT FORAMEN OVALE, AND ATRIAL **CATHETER** (
Abstract Available)

4/6/24 (Item 24 from file: 5)
07310639 BIOSIS NO.: 000090090532

THE EFFECT OF SUPEROXIDE DISMUTASE ON REPERFUSION INJURY DURING OPEN HEART SURGERY WITH BLOOD CARDIOPLEGIA
1990

4/6/25 (Item 25 from file: 155)
05334107 90041938 PMID: 2811143

[Accessory left superior vena cava]
O dobavochnoi levoi verkhnei poloi vene.
Sep 1989

4/6/26 (Item 26 from file: 155)
05779848 88109862 PMID: 2827910

Adrenergic **coronary** vasoconstriction helps maintain uniform transmural blood flow distribution during exercise.
Feb 1988

4/6/27 (Item 27 from file: 155)
06367243 88124424 PMID: 3432119

Cor triatriatum associated with partial anomalous pulmonary venous

connection to the **coronary sinus**: echocardiographic and angiocardiographic features.
1987

4/6/28 (Item 28 from file: 155)
05776204 88110191 PMID: 2827926
Demonstration of persistent left superior vena cava by first pass radionuclide angiography.
Nov 1987

4/6/29 (Item 29 from file: 35)
0956778 ORDER NO: AAD87-13369
MAINTENANCE OF A UNIFORM TRANSMURAL DISTRIBUTION OF **CORONARY** BLOOD FLOW BY ADRENERGIC VASOCONSTRICTION DURING EXERCISE
Year: 1987

4/6/30 (Item 30 from file: 155)
05648649 87155752 PMID: 3103575
[Double superior vena cava with **drainage** of the right superior vena cava into the left auricle. Presentation as a cerebral abscess in an adult]
Veine cave superieure double avec **drainage** de la veine cave superieure droite dans l'oreillette gauche. Revelation par un abces cerebral chez un adulte.
Oct 1986

4/6/31 (Item 31 from file: 5)
05239546 BIOSIS NO.: 000082080168
PERSISTENT LEFT SUPERIOR VENA CAVA WITH SPECIAL REFERENCE ON ECHOCARDIOGRAPHIC FINDING
1986

4/6/32 (Item 32 from file: 73)
03489523 EMBASE No: 1987006459
Double superior vena cava with **drainage** of the right superior vena cava into the left atrium presenting as a cerebral abscess in an adult
VEINE CAVE SUPERIEURE DOUBLE AVEC **DRAINAGE** DE LA VEINE CAVE SUPERIEURE DROITE DANS L'OREILLETTE GAUCHE. REVELATION PAR UN ABCES CEREBRAL CHEZ UN ADULTE
1986

4/6/33 (Item 33 from file: 155)
06083485 85105870 PMID: 3968321
Persistent left superior vena cava and right superior vena cava **drainage** into the left atrium without arterial hypoxemia.
Feb 1985

4/6/34 (Item 34 from file: 73)
02980138 EMBASE No: 1985074098
Persistent left superior vena cava and right superior vena cava **drainage** into the left atrium without arterial hypoxemia
1985

4/6/35 (Item 35 from file: 155)
04533993 84104504 PMID: 6691871
Cor triatriatum sinistrum. Diagnostic features on cross sectional echocardiography.

Feb 1984

4/6/36 (Item 36 from file: 155)
03853518 84243590 PMID: 6737797

A case report of communication of the **coronary sinus** with both atria associated with persistent left superior vena cava.

Jan 1984

4/6/37 (Item 37 from file: 155)
04626424 84048231 PMID: 6605645

Effects of enflurane-nitrous oxide anaesthesia and surgical stimulation on regional **coronary** haemodynamics in a patient with LAD bypass graft.

Oct 1983

4/6/38 (Item 38 from file: 73)
02417623 EMBASE No: 1983128634

Echocardiographic assessment of hemiazygos continuation of the inferior vena cava

1982

4/6/39 (Item 39 from file: 155)
04459427 82045155 PMID: 6794521

[Diagnosis of a complete atrioventricular canal with infundibular pulmonary stenosis and left superior vena cava by 2-dimensional contrast echocardiography. Apropos of a surgically treated case]

Diagnostic d'un canal atrio-ventriculaire complet avec stenose infundibulaire pulmonaire et veine cave superieure gauche par l'echocardiographie bidimensionnelle de contraste. A propos d'un cas opere.
Sep 1981

4/6/40 (Item 40 from file: 73)
01807178 EMBASE No: 1981242131

A case report of complete atrioventricular canal with pulmonary infundibular stenosis and persistent left superior vena cava diagnosed by contrast two-dimensional echocardiography

DIAGNOSTIC D'UN CANAL ATRIO-VENTRICULAIRE COMPLET AVEC STENOSE INFUNDIBULAIRE PULMONAIRE ET VEIN CAVE SUPERIEURE GAUCHE PAR L'ECHOGRAPHIE BIDIMENSIONNELLE DE CONTRASTE. A PROPOS D'UN CAS OPERE

1981

4/6/41 (Item 41 from file: 155)
04147416 80224836 PMID: 7389804

Persistent left superior vena cava with **coronary sinus** and left atrial connections.

Mar 1980

4/6/42 (Item 42 from file: 155)
03169615 79206392 PMID: 453040

Echocardiographic findings in patients with left superior vena cava and dilated **coronary sinus**.

Jul 1979

4/6/43 (Item 43 from file: 5)
02927284 BIOSIS NO.: 000069035402

DETECTION OF PERSISTENT LEFT SUPERIOR VENA CAVA BY 2 DIMENSIONAL CONTRAST ECHO CARDIOGRAPHY

1979

4/6/44 (Item 44 from file: 5)
02920241 BIOSIS NO.: 000069028359
VENOUS ANOMALIES OF THE **CORONARY SINUS** DETECTION BY M MODE 2 DIMENSIONAL
AND CONTRAST ECHO CARDIOGRAPHY
1979

4/6/45 (Item 45 from file: 73)
01717188 EMBASE No: 1980085741
Surgical management of the persistent left superior vena cava **draining**
into the left atrium - surgical consideration for simple ligation technique
of the left superior vena cava
1979

4/6/46 (Item 46 from file: 73)
01496428 EMBASE No: 1979217477
Echocardiographic findings with patients with left superior vena cava and
dilated **coronary sinus**
1979

4/6/47 (Item 47 from file: 73)
00847531 EMBASE No: 1977193104
Total anomalous pulmonary venous **drainage** to the **coronary sinus** and left
innominate vein. A case of intracardiac 'cor triatriatum dextrum'
RETORNO VENOSO PULMONAR ANORMAL TOTAL NO SEIO CORONARIO E VEIA INOMINADA
ESQUERDA. 'COR TRIATRIATUM DEXTRUM' INTRA CARDIACO. APRESENTACAO DE UM CASO
1976

4/6/48 (Item 48 from file: 73)
00164903 EMBASE No: 1974155026
Tetralogy of Fallot associated with total anomalous pulmonary venous
drainage
1973

4/6/49 (Item 49 from file: 73)
00053162 EMBASE No: 1974043210
The fraction of myocardial blood flow **drained** by the **coronary sinus**
UBER DEN ANTEIL DES KORONARSINUS AUSFLUSSES AN DER MYOKARDDURCHBLUTUNG
DES LINKEN VENTRIKELS
1973

4/6/50 (Item 50 from file: 198)
00683765 ABS-D3320 SUBFILE: ABS
PRODUCT(s): 16-652 DEFIBRILLATORS, AUTOMATIC, IMPLANTABLE
16-653 Leads, Implantable Defibrillator
16-995 Electrodes, Intracardiac
17-989 Defibrillator/Pacemakers, Implantable
COMMON DEVICE NAME: (1) Ventak PRX III Model 1715 Implantable
Cardioverter-Defibrillators; (2) Model 0072 Endotak C Leads; (3) Model
6992A **Coronary Sinus** Pacing Electrodes; (4) Dual-Chamber Pacemakers
PUBLICATION DATE: 9805

9/6,K/1 (Item 1 from file: 155)
DIALOG(R)File 155:
10133740 99259766 PMID: 10327782

Mixed variety of total anomalous pulmonary venous connection: diagnosis by 2D echocardiography and Doppler colour flow imaging.
Jan-Feb 1999

... Multiple windows were used to identify individual pulmonary veins and various sites of **drainage**. Cardiac **catheterisation** and angiography were performed for 17 cases. In 11 of 21 cases, the left upper...

... seen **draining** into vertical vein and the left lower and right-sided pulmonary veins were **draining** into the **coronary sinus**. Cardiac and supracardiac combinations of other types were seen in eight more cases. Both **drainage**...

... and supracardiac and infracardiac in another. On comparing echocardiographic findings with those obtained at cardiac **catheterisation** and/or surgery (carried out in 18 cases), there were three instances of error. In...

... colour flow imaging) the second site of **drainage** could not be defined. These patients were **catheterised** as all four pulmonary veins were not delineated by echo. The third error occurred in...

; Angiography; Blood Flow Velocity; Cardiac Surgical Procedures; Follow-Up Studies; Heart **Catheterization**; Heart Defects, Congenital--radiography--RA; Heart Defects, Congenital--surgery--SU; Infant; Infant, Newborn; Pulmonary Veins...

9/6,K/2 (Item 2 from file: 158)
DIALOG(R)File 158:(c) 2002 DIOGENES. All rts. reserv.
01265667 DIOGENES RECORD NUMBER: 1621870

MDR (MAUDE) REPORT: PARAGON HEALTHCARE CORP. DEFLECTABLE ORTHOGONAL **CATHETER** MODEL 0D7-8X2D-005-FS - OTHER.

MDR (MAUDE) REPORT: PARAGON HEALTHCARE CORP. DEFLECTABLE ORTHOGONAL **CATHETER** MODEL 0D7-8X2D-005-FS - OTHER.

PER PHONE COMMUNICATION FROM HOSP, A CORDIS WEBSTER ORTHOGONAL ELECTROPHYSIOLOGY **CATHETER** WAS USED IN AN ELECTROPHYSIOLOGY STUDY THAT PROGRESSED WITHOUT DIFFICULTY UNTIL THE PHYSICIAN **REMOVED** THE **CATHETER** FROM THE **CORONARY SINUS**. THE PHYSICIAN REPORTED RESISTANCE UPON **REMOVAL** FROM **CORONARY SINUS**. PT WAS NONSYMPTOMATIC THROUGHOUT PROCEDURE. A CHEST FILM CONFIRMED THAT A SMALL FRAGMENT WAS IMBEDDED...

...PT REMAINS SYMPTOM FREE PER HOSP REPORT. FRAGMENT PRESUMABLY IS A SINGLE PLATINUM ELECTRODE FROM **CATHETER**. ONE OF THE SURFACE MOUNTED ELECTRODES MAY HAVE BEEN COMPROMISED BY THE EXTERIOR RIM OF A TUBE USED TO PACKAGE THE **CATHETER** INSIDE THE MYLAR TYVEK POUCH. ON MARCH 8, 1999, PARAGON REC'D A COPY OF...

... THAT THE ELECTROPHYSIOLOGY STUDY PROCEEDED WITHOUT DIFFICULTY UNTIL THE PHYSICIAN INITIATED THE **REMOVAL** OF THE **CATHETER** FROM THE PT'S **CORONARY SINUS**. THE PT WAS DESCRIBED BY A CLINICIAN TO BE...

... DEMONSTRATED THAT ANY POSSIBLE RECURRENCE OF THIS INCIDENT WOULD BE LIMITED TO THIS TYPE OF **CATHETER**. THE PRODUCT CONTAINED SURFACE-MOUNTED PLATINUM ELECTRODES. THEY MAY HAVE COME IN CONTACT WITH THE...

... OF THE TUBING WHILE BEING INSERTED. THIS MANEUVER MAY HAVE COMPROMISED THE STABILITY OF THE **CATHETER** ELECTRODES IN ISOLATED CASES. IF ALL ELECTRODES ARE FOUND TO BE PROPERLY INTACT, FOLLOWING INSPECTION...

9/6,K/3 (Item 3 from file: 73)
DIALOG(R)File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.
10729515 EMBASE No: 2000138950

Left superior vena cava and **coronary** artery disease in a patient with aortic, mitral and tricuspid valve disease. Diagnosis and surgical

management

1998

...aortic regurgitation, tricuspid regurgitation, chronic stable angina (single vessel disease). A left superior vena cava **drained** into **coronary sinus** was also identified during cardiac **catheterization**. Surgical treatment (mitral valve replacement, aortic valve replacement, tricuspid valvuloplasty, and myocardial revascularization) is presented...

MEDICAL DESCRIPTORS:

...feature; **coronary** artery bypass graft; **coronary** artery disease --diagnosis--di; **coronary** artery disease--surgery--su; **coronary sinus**; diabetes mellitus; dyspnea; fatigue; fever; heart atrium fibrillation; heart **catheterization**; heart muscle revascularization; laboratory test; mitral valve commissurotomy; mitral valve replacement; physical examination; superior cava...

9/6,K/4 (Item 4 from file: 155)

DIALOG(R)File 155:

10070611 99100318 PMID: 9884580

Surgical repair of **coronary sinus** type partial anomalous pulmonary venous **drainage** with intact atrial septum]

Nov 1998

Surgical repair of **coronary sinus** type partial anomalous pulmonary venous **drainage** with intact atrial septum]

... 1.9 and pulmonary artery pressure was 38/7 mmHg (mean: 17 mmHg) by cardiac **catheterization**. Selective pulmonary angiogram showed that all right pulmonary veins **drained** into the **coronary sinus** without evidence of an atrial septal defect. Enhanced chest CT clearly demonstrated the connection between...

9/6,K/8 (Item 8 from file: 155)

DIALOG(R)File 155:

09062764 97048825 PMID: 8893555

Intermediate results of the extracardiac Fontan procedure.

Nov 1996

... percutaneous creation of a stented fenestration from the extracardiac tunnel to the systemic atrium. Late **catheterizations** reveal unobstructed extracardiac lateral tunnel function and low pulmonary pressures (range, 11 to 13 mm...

... lines, (4) preservation of **sinus** rhythm and no arrhythmias at 2 year follow-up, (5) **drainage** of the **coronary sinus** to low pressure atrium, (6) allowance for early/late fenestrations, (7) prevention of baffle leaks...

...; **Coronary** Angiography; Follow-Up Studies; Fontan Procedure--adverse effects--AE; Fontan Procedure--instrumentation--IS; Heart **Catheterization**; Heart Defects, Congenital--diagnosis--DI; Infant; Polytetrafluoroethylene; Surgical Flaps; Surgical Mesh; Treatment Outcome

9/6,K/9 (Item 9 from file: 155)

DIALOG(R)File 155:

08934548 96286180 PMID: 8685517

[Persistence of the left superior vena cava associated with aortic insufficiency: diagnostic and therapeutic considerations]

Persistencia de la vena cava superior izquierda asociada a insuficiencia aortica: consideraciones diagnosticas y terapeuticas.

Jan 1996

... old male for acquired aortic valve disease the persistence of a left superior vena cava **draining** into the **coronary sinus** was detected.

This is a frequent congenital malformation of the systemic venous system that has...

... functional nature of the condition--including transthoracic and transesophageal echocardiography using echocardiographic contrast, and cardiac **catheterization** with cardiac and vascular angiography.

...; Valve Insufficiency--diagnosis--DI; Brachiocephalic Veins--abnormalities--AB; Brachiocephalic Veins--radiography--RA; Echocardiography; Electrocardiography; Heart **Catheterization**; Phlebography; Vena Cava, Superior--radiography--RA

9/6,K/11 (Item 11 from file: 155)

DIALOG(R)File 155:

08267589 95033309 PMID: 7946419

Surgical repair of transposition of great arteries and total anomalous pulmonary venous return to the **coronary sinus** (TGA with TAPVR).

1994

Surgical repair of transposition of great arteries and total anomalous pulmonary venous return to the **coronary sinus** (TGA with TAPVR).

... very rare; we report one case of this malformation with an intracardiac type of TAPVR **draining** into the **coronary sinus**. The surgical repair was performed directing the **coronary sinus** blood flow to the tricuspid valve...

... pulmonary veins to the right ventricle. Almost 2 years after surgery, the patient underwent cardiac **catheterization** that showed integrity of the surgical repair with normal pressures in all heart chambers. To...

9/6,K/12 (Item 12 from file: 155)

DIALOG(R)File 155:

07993193 94116042 PMID: 8287457

Right **coronary** artery cirroid with fistulous connection to the **coronary sinus**.

Dec 1993

Right **coronary** artery cirroid with fistulous connection to the **coronary sinus**.

...of an anomalous right **coronary** artery with fistulous connection to the **coronary sinus**. At cardiac **catheterization**, an oxygen step-up in the right atrium indicated a 1.3:1.0 left-to-right shunt. Aortic root angiography showed a large and calcified right **coronary** artery cirroid **draining** to the **coronary sinus**, which appeared remarkably dilated. In this rare anomaly, cardiac **catheterization** is necessary, not only to quantify the magnitude of the left-to-right shunt, which...

...; US; Diagnosis, Differential; Echocardiography, Transesophageal; Fistula--diagnosis--DI; Fistula--radiography--RA; Fistula--ultrasonography--US; Heart **Catheterization**; Heart Neoplasms--diagnosis--DI; Middle Age; Myxoma--diagnosis--DI

9/6,K/13 (Item 13 from file: 155)

DIALOG(R)File 155:

07910781 93292434 PMID: 8513741

Total anomalous pulmonary venous **drainage**.

Feb 1993

A case of a Nigerian full-term infant with complete anomalous pulmonary venous **drainage** into the **coronary sinus** is described. Presentation was from birth but the cardiac defect was clinically suspected at the age of 51 hours. Diagnosis was confirmed by two-dimensional echocardiography and cardiac **catheterization**. Despite a high operative mortality

associated with this condition, the infant had a remarkably smooth...

; Abnormalities--diagnosis--DI; Abnormalities--physiopathology--PP;
Abnormalities--surgery--SU; Abnormalities--ultrasonography--US; Echocardiography; Heart **Catheterization**; Hemodynamics; Infant, Newborn

9/6,K/15 (Item 15 from file: 155)

DIALOG(R)File 155:

06780831 92026876 PMID: 1928717

[The seated position in patent foramen ovale?]

Sitzende Position bei offenem Foramen ovale?

Jul 1991

...via the left antecubital vein; the chest X-ray film documented correct positioning of the **catheter** tip within the atrium but an aberrant course of the superior vena cava. Echocardiography was...

... and radiologic examinations revealed a patent foramen ovale and a persisting left superior vena cava **draining** into a dilated **coronary sinus**. Surgery was rescheduled and carried out uneventfully in the prone position. This case demonstrates: 1...

...of a thoracic-X-ray film compared to atrial ECG tracing as not only the **catheter** tip position, but also the course of the **catheter** can be identified; and 2) the usefulness of preoperative screening for a patent foramen ovale...

; Adult; **Catheterization**, Central Venous--methods--MT

9/6,K/16 (Item 16 from file: 34)

DIALOG(R)File 34:(c) 2002 Inst for Sci Info. All rts. reserv.

01116371 Genuine Article#: FX254 Number of References: 7

Title: THE SEATED POSITION, PATENT FORAMEN OVALE, AND ATRIAL **CATHETER** (Abstract Available)

Title: THE SEATED POSITION, PATENT FORAMEN OVALE, AND ATRIAL **CATHETER**

...Abstract: via the left antecubital vein; the chest X-ray film documented correct positioning of the **catheter** tip within the atrium but an aberrant course of the superior vena cava. Echocardiography was...

...and radiologic examinations revealed a patent foramen ovale and a persisting left superior vena cava **draining** into a dilated **coronary sinus** (Fig. 2). Surgery was rescheduled and carried out uneventfully in the prone position. This case...

...of a thoracic-X-ray film compared to atrial ECG tracing as not only the **catheter** tip position, but also the course of the **catheter** can be identified and 2) the usefulness of preoperative screening for a patent foramen ovale...

9/6,K/17 (Item 17 from file: 155)

DIALOG(R)File 155:

05334107 90041938 PMID: 2811143

[Accessory left superior vena cava]

O dobavochnoi levoi verkhnei poloi vene.

Sep 1989

... anesthesiology-resuscitation department who required long-term intensive therapy. In 61 of these patients the **catheter** was introduced through the left subclavian vein. An accessory left superior vena cava (ALSVC) which **drained** through the **coronary sinus** into the right atrium was found in 3 patients (4.9%). Study of the anatomical...

; **Catheterization**; Subclavian Vein

9/6,K/18 (Item 18 from file: 155)

DIALOG(R) File 155:

06367243 88124424 PMID: 3432119

Cor triatriatum associated with partial anomalous pulmonary venous connection to the **coronary sinus** : echocardiographic and angiocardiographic features.

1987

Cor triatriatum associated with partial anomalous pulmonary venous connection to the **coronary sinus** : echocardiographic and angiocardiographic features.

... multiple facial and intrathoracic hemangiomas. The cardiac diagnosis was made by two-dimensional echocardiography. Cardiac **catheterization** and angiography confirmed the findings and also demonstrated a persistent left superior vena cava **draining** to the **coronary sinus**. The infant underwent successful surgical repair. Partial anomalous pulmonary venous connection and left superior vena...

... triatriatum. Although two-dimensional echocardiography is sensitive for the detection of cor triatriatum, preoperative cardiac **catheterization** is necessary to identify unequivocally systemic and pulmonary venous connections.

9/6,K/19 (Item 19 from file: 155)

DIALOG(R) File 155:

06083485 85105870 PMID: 3968321

Persistent left superior vena cava and right superior vena cava **drainage** into the left atrium without arterial hypoxemia.

Feb 1985

... a systemic venous communication with the left heart during attempted insertion of a pulmonary flotation **catheter**. There was no evidence of cyanosis or systemic arterial desaturation. A right superior vena cava that emptied into the right superior pulmonary vein and a persistent left superior vena cava **draining** into the **coronary sinus** were confirmed pathologically after death related to a brain abscess. The embryology, physiology and noninvasive...

; Echocardiography; Heart Atrium--physiopathology--PP; Heart Atrium--radionuclide imaging--RI; Heart **Catheterization**; Middle Age; Pulmonary Veins--pathology--PA; Pulmonary Veins--physiopathology--PP; Vena Cava, Superior--physiopathology--PP...

9/6,K/20 (Item 20 from file: 73)

DIALOG(R) File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.

02980138 EMBASE No: 1985074098

Persistent left superior vena cava and right superior vena cava **drainage** into the left atrium without arterial hypoxemia

1985

...a systemic venous communication with the left heart during attempted insertion of a pulmonary flotation **catheter**. There was no evidence of cyanosis or systemic arterial desaturation. A right superior vena cava that emptied into the right superior pulmonary vein and a persistent left superior vena cava **draining** into the **coronary sinus** were confirmed pathologically after death related to a brain abscess. The embryology, physiology and noninvasive...

MEDICAL DESCRIPTORS:

autopsy; brain abscess; case report; congenital heart malformation; **coronary sinus**; echocardiography; heart infarction; scintiangiography; priority journal; methodology; adult; congenital disorder; diagnosis; human

; great blood vessel...

9/6,K/21 (Item 21 from file: 155)

DIALOG(R) File 155:

03853518 84243590 PMID: 6737797

A case report of communication of the **coronary sinus** with both atria associated with persistent left superior vena cava.
Jan 1984

A case report of communication of the **coronary sinus** with both atria associated with persistent left superior vena cava.

A 16-year-old Japanese girl with a persistent left superior vena cava **draining** into the **coronary sinus** was surgically treated. Both **coronary sinus** and left superior vena cava were totally unroofed in...

... Both preoperative diagnosis and the ensuing successful correction were performed only after the third cardiac **catheterization** and the third operation, respectively. The importance of preoperative diagnosis and the surgical procedures to...

; Adolescence; **Coronary Vessel Anomalies--surgery--SU**; Heart Atrium --surgery--SU; Heart **Catheterization** ; Heart Septal Defects, Atrial --surgery--SU; Heart Septal Defects, Ventricular--diagnosis--DI; Vena Cava, Superior...

9/6,K/22 (Item 22 from file: 155)

DIALOG(R) File 155:

04147416 80224836 PMID: 7389804

Persistent left superior vena cava with **coronary sinus** and left atrial connections.
Mar 1980

Persistent left superior vena cava with **coronary sinus** and left atrial connections.

... severe congestive cardiac failure and physical signs of an atrial septal defect. Investigation by cardiac **catheterisation** and cross-sectional echocardiography showed a persistent left superior vena cava **draining** through an enlarged **coronary sinus** into the right atrium. In addition, the left atrium was connected to the **coronary sinus**...

9/6,K/23 (Item 23 from file: 155)

DIALOG(R) File 155:

03169615 79206392 PMID: 453040

Echocardiographic findings in patients with left superior vena cava and dilated **coronary sinus**.
Jul 1979

Echocardiographic findings in patients with left superior vena cava and dilated **coronary sinus**.

Three patients with a left superior vena cava **draining** into a dilated **coronary sinus** were studied with cardiac **catheterization** and echocardiography. The diagnosis was confirmed at operation in two patients. A posterior echo-free...

; Adult; **Coronary Vessel Anomalies--complications--CO**; **Coronary Vessel Anomalies--physiopathology--PP**; Heart **Catheterization** .; Hypertension, Pulmonary--etiology--ET; Middle Age; Mitral Valve Insufficiency --complications--CO; Mitral Valve Prolapse--complications...

9/6,K/24 (Item 24 from file: 5)

DIALOG(R) File 5: (c) 2002 BIOSIS. All rts. reserv.

02927284 BIOSIS NO.: 000069035402
DETECTION OF PERSISTENT LEFT SUPERIOR VENA CAVA BY 2 DIMENSIONAL CONTRAST
ECHO CARDIOGRAPHY
1979
DESCRIPTORS: HUMAN ARM VEIN VALVULAR HEART DISEASE CONGENITAL HEART DISEASE
ABNORMAL VENOUS **DRAINAGE** ABNORMAL **CORONARY SINUS** CONTRAST MATERIAL
CATHETERIZATION SURGERY

9/6,K/25 (Item 25 from file: 5)
DIALOG(R)File 5:(c) 2002 BIOSIS. All rts. reserv.
02920241 BIOSIS NO.: 000069028359
VENOUS ANOMALIES OF THE **CORONARY SINUS** DETECTION BY M MODE 2
DIMENSIONAL AND CONTRAST ECHO CARDIOGRAPHY
1979
VENOUS ANOMALIES OF THE **CORONARY SINUS** DETECTION BY M MODE 2
DIMENSIONAL AND CONTRAST ECHO CARDIOGRAPHY
...ABSTRACT: in 8 patients [1 day to 18 yr old] with a left superior vena
cava **draining** to the **coronary sinus** and 2 patients with total
anomalous pulmonary venous connection to the **coronary sinus**. The
diagnosis was confirmed in each patient by cardiac **catheterization** and
surgery. In the M-mode echocardiogram, a dense echo was present posterior
to the...

9/6,K/26 (Item 26 from file: 73)
DIALOG(R)File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.
01496428 EMBASE No: 1979217477
Echocardiographic findings with patients with left superior vena cava and
dilated **coronary sinus**
1979
Echocardiographic findings with patients with left superior vena cava and
dilated **coronary sinus**
Three patients with a left superior vena cava **draining** into a dilated
coronary sinus were studied with cardiac **catheterization** and
echocardiography. The diagnosis was confirmed at operation in two patients.
A posterior echo-free...
MEDICAL DESCRIPTORS:
* **coronary sinus** ; *echocardiography

9/6,K/27 (Item 27 from file: 73)
DIALOG(R)File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.
00847531 EMBASE No: 1977193104
Total anomalous pulmonary venous **drainage** to the **coronary sinus** and
left innominate vein. A case of intracardiac 'cor triatriatum dextrum'
RETORNO VENOSO PULMONAR ANORMAL TOTAL NO SEIO CORONARIO E VEIA INOMINADA
ESQUERDA. 'COR TRIATRIATUM DEXTRUM' INTRA CARDIACO. APRESENTACAO DE UM CASO
1976
Total anomalous pulmonary venous **drainage** to the **coronary sinus** and
left innominate vein. A case of intracardiac 'cor triatriatum dextrum'
...triatriatum dextrum' mentioned, there was anomalous **drainage** of the
pulmonary veins. All the pulmonary veins **drained** into the **coronary**
sinus, except a small one, which **drained** the upper part of the left lung
into the...
...therefore, an almost completely abnormal venous pulmonary return of the
blood to the heart. Cardiac **catheterization** revealed that the two loculi
of the right atrium had different Oinf 2 saturation levels...
MEDICAL DESCRIPTORS:

*cor triatriatum; * **coronary sinus** ; *echocardiography; *heart **catheterization** ; *heart surgery; *lung vein **drainage** anomaly

9/6,K/28 (Item 28 from file: 73)
DIALOG(R)File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.
00164903 EMBASE No: 1974155026
Tetralogy of Fallot associated with total anomalous pulmonary venous **drainage**
1973

...diaphragm was found. The other patient had the association of tetralogy with anomalous pulmonary venous **drainage** into the **coronary sinus** diagnosed by cardiac **catheterization** . Following shunt surgery, prolonged continuous positive airway pressure was necessary to adequately ventilate the lungs...

MEDICAL DESCRIPTORS:

*artificial ventilation; *congenital heart malformation; *fallot tetralogy; *heart **catheterization** ; *heart surgery; *lung edema; *pulmonary vein malformation; *tracheostomy

9/6,K/29 (Item 29 from file: 73)
DIALOG(R)File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.
00053162 EMBASE No: 1974043210

The fraction of myocardial blood flow **drained** by the **coronary sinus**
UBER DEN ANTEIL DES KORONARSINUS AUSFLUSSES AN DER MYOKARDDURCHBLUTUNG
DES LINKEN VENTRIKELS
1973

The fraction of myocardial blood flow **drained** by the **coronary sinus**
...simultaneously by method 2 represents the fraction of left ventricular myocardial blood flow which is **drained** by the **coronary sinus** . The experiments were carried out on 25 anesthetized closed chest dogs weighing from 22 to...

MEDICAL DESCRIPTORS:

*aorta pressure; * **coronary sinus** ; *heart hemodynamics; *heart muscle blood flow; *heart muscle oxygen consumption; *heart rate; *heart ventricle pressure

9/6,K/30 (Item 30 from file: 198)
DIALOG(R)File 198:(c) 2002 ECRI-nonprft agncy. All rts. reserv.
00683765 ABS-D3320 SUBFILE: ABS

PRODUCT(s): 16-652 DEFIBRILLATORS, AUTOMATIC, IMPLANTABLE
16-653 Leads, Implantable Defibrillator
16-995 Electrodes, Intracardiac
17-989 Defibrillator/Pacemakers, Implantable

COMMON DEVICE NAME: 1) Ventak PRX III Model 1715 Implantable Cardioverter-Defibrillators; (2) Model 0072 Endotak C Leads; (3) Model 6992A **Coronary Sinus** Pacing Electrodes; (4) Dual-Chamber Pacemakers
PUBLICATION DATE: 9805

...COMMON DEVICE NAME: III Model 1715 Implantable Cardioverter-Defibrillators; (2) Model 0072 Endotak C Leads; (3) Model 6992A **Coronary Sinus** Pacing Electrodes; (4) Dual-Chamber Pacemakers
... atrial fibrillation and that dual-chamber pacemaker implantation was performed. The active fixation lead was **removed** , and a **coronary sinus** pacing **catheter** was inserted. The authors state that acceptable left atrial pacing was accomplished and that there...

10/6,K/1 (Item 1 from file: 155)

DIALOG(R) File 155:

09350887 97303920 PMID: 9221122

[Circulatory changes in acute myocardial ischemia in dogs with experimental diabetes mellitus]

Zminy krovobihu pry hostrii ishemii miokarda u sobak z eksperymental'nym tsukrovym diabetom.
1997

On alloxane-diabetic dogs under chloralose anaesthesia without opening the chest **catheterization**, extracorporeal perfusion and resistography of **coronary** arteries, **catheterization** and continuous **drainage** of **coronary sinus**, **catheterization** of major vessels and heart chambers were performed. Acute myocardial ischemia was induced by the...

10/6,K/2 (Item 2 from file: 155)

DIALOG(R) File 155:

07584856 92270984 PMID: 1589652

[A case of isolated tricuspid regurgitation associated with persistent left superior vena cava]

May 1992

...ventricle were recognized and left atrium was also dilated moderately. Although results of right cardiac **catheterization** showed almost normal pressure, remarkable TR of grade IV was registered by Doppler echocardiography. Additional diagnosis of PLSVC **drained** to dilated **coronary sinus** was made by venography from the left antecubital vein. But evidence of other cardiac shunt...

... might be a cause of TR was negligible. It is reported, in general, that PLSVC **drained** to **coronary sinus** occurs asymptotically, and there is no accepted theory that PLSVC is able to be a...

10/6,K/3 (Item 3 from file: 155)

DIALOG(R) File 155:

06973249 93008876 PMID: 1394926

Platelet hyperaggregability across the **coronary** bed in response to rapid atrial pacing in patients with stable **coronary** artery disease.

Oct 1992

... flow velocities (and thereby shear stress) increase across an atherosclerotic bed. METHODS AND RESULTS. During **catheterization**, 82 patients (36 with left **coronary** artery disease, 12 with only right **coronary** artery disease...

... normal **coronary** arteries, and patients with significant disease only in the right **coronary** artery (venous **drainage** not into the **coronary sinus**) did not show any changes in either the **coronary sinus** or arterial blood with atrial...

10/6,K/4 (Item 4 from file: 155)

DIALOG(R) File 155:

05779848 88109862 PMID: 2827910

Adrenergic **coronary** vasoconstriction helps maintain uniform transmural blood flow distribution during exercise.

Feb 1988

... the day of study, the dog was anesthetized briefly (fentanyl and nitrous oxide) for percutaneous **catheterization**, and alpha-receptors in one myocardial region were blocked with phenoxybenzamine (0.25 mg/kg) infused selectively into the left circumflex **coronary** artery. Recirculation of phenoxybenzamine was minimized by **drainage** of **coronary sinus**

outflow during the infusion. After the dog recovered from the anesthesia, regional blood flow was...

10/6,K/5 (Item 5 from file: 155)

DIALOG(R)File 155:

05776204 88110191 PMID: 2827926

Demonstration of persistent left superior vena cava by first pass radionuclide angiography.

Nov 1987

A case of the left superior vena cava **draining** to the **coronary sinus** without associated intracardiac shunt was initially demonstrated by first pass radionuclide angiography. The patient had...

...pain for 8 years, and had sick **sinus** syndrome with a long cardiac pause. Cardiac **catheterization** confirmed this diagnosis, and a transvenous pacemaker was successfully implanted through the left superior vena...

10/6,K/6 (Item 6 from file: 155)

DIALOG(R)File 155:

04626424 84048231 PMID: 6605645

Effects of enflurane-nitrous oxide anaesthesia and surgical stimulation on regional **coronary** haemodynamics in a patient with LAD bypass graft.

Oct 1983

... graft and angiographically visible collaterals from a normal right **coronary** artery. A three-thermistor thermodilution **catheter** was used for measuring total **coronary sinus** blood flow and great cardiac venous blood flow...

... induced marked **coronary** vasodilatation and redistribution of blood flow from the LAD to other areas **draining** into the **coronary sinus**. The most likely mechanism for the redistribution of blood flow in this patient was steal...

10/6,K/7 (Item 7 from file: 155)

DIALOG(R)File 155:

04533993 84104504 PMID: 6691871

Cor triatriatum sinistrum. Diagnostic features on cross sectional echocardiography.

Feb 1984

... appearance, not previously reported, was found. All three cases were referred for surgery without cardiac **catheterisation**, and the diagnosis proved to be correct. The characteristic echocardiographic feature of cor triatriatum is...

... of the membrane, makes it possible to distinguish cor triatriatum from total anomalous pulmonary venous **drainage** to the **coronary sinus**. From a review of past experience at the Brompton Hospital of the diagnostic accuracy of cardiac **catheterisation** in this condition, it is concluded that cross sectional echocardiography is superior to angiography as...

10/6,K/8 (Item 8 from file: 155)

DIALOG(R)File 155:

04459427 82045155 PMID: 6794521

[Diagnosis of a complete atrioventricular canal with infundibular pulmonary stenosis and left superior vena cava by 2-dimensional contrast echocardiography. Apropos of a surgically treated case]

Diagnostic d'un canal atrio-ventriculaire complet avec stenose infundibulaire pulmonaire et veine cave superieure gauche par l'echocardiographie bidimensionnelle de contraste. A propos d'un cas opere.

Sep 1981

...old child with complete atrioventricular canal, pulmonary infundibular stenosis and persistent left superior vena cava **draining** into the **coronary sinus** is reported. Two-dimensional echocardiography with injection of contrast in a left arm vein gave a precise and complete diagnosis of the malformations before **catheterisation** and angiography. The complete atrioventricular canal was demonstrated by apical four-chamber views. The pulmonary...

10/6,K/9 (Item 1 from file: 5)
DIALOG(R)File 5:(c) 2002 BIOSIS. All rts. reserv.
05239546 BIOSIS NO.: 000082080168
PERSISTENT LEFT SUPERIOR VENA CAVA WITH SPECIAL REFERENCE ON
ECHOCARDIOGRAPHIC FINDING
1986

ABSTRACT: Among 1500 adult patients who underwent cardiac **catheterization** in recent 8 years at Chang Gung Memorial Hospital (CGMH), 14 had persistent left superior...

...contrast 2-D echocardiography plays a major role in the non-invasive diagnosis of PLSVC **draining** into **coronary sinus**.

10/6,K/10 (Item 1 from file: 35)
DIALOG(R)File 35:(c) 2002 ProQuest Info&Learning. All rts. reserv.
0956778 ORDER NO: AAD87-13369
MAINTENANCE OF A UNIFORM TRANSMURAL DISTRIBUTION OF **CORONARY** BLOOD FLOW BY
ADRENERGIC VASOCONSTRICTION DURING EXERCISE
Year: 1987

...carotid artery loops. On the day of study, the dog was anesthetized briefly for percutaneous **catheterization**, and alpha receptors in one myocardial region were blocked with phenoxybenzamine (0.25 mg/kg...
...circumflex **coronary** artery. Recirculation of phenoxybenzamine and contamination of other myocardial regions were minimized by **drainage** of **coronary sinus** outflow during the infusion. After the dog recovered from the anesthesia regional blood flow was...

10/6,K/11 (Item 1 from file: 73)
DIALOG(R)File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.
05278137 EMBASE No: 1993046222
Correction of transposition of the great arteries accompanied by partial form of atrioventricular canal and tricuspid insufficiency. Description of a case
1992

...year-old girl who was referred for progressive dyspnea and cyanosis. Clinical examination including heart **catheterization** and angiocardigraphy revealed transposition of the great arteries accompanied by partial form of atrioventricular canal, tricuspid insufficiency and persistent left superior vena cava **draining** into the **coronary sinus**. Corrective operation included plastic reconstruction of mitral and tricuspid valves and Mustard procedure. A new...

10/6,K/12 (Item 2 from file: 73)
DIALOG(R)File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.
02417623 EMBASE No: 1983128634
Echocardiographic assessment of hemiazygos continuation of the inferior vena cava
1982

...atrial-inferior vena caval junction. Differentiation of this entity from persistent left superior vena cava **draining** into the **coronary sinus**, a more common anomaly of systemic venous return and anomalous pulmonary venous return to the **coronary sinus** is important prior to cardiac **catheterization** or cardiac surgery.

10/6,K/13 (Item 3 from file: 73)
DIALOG(R)File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.
01807178 EMBASE No: 1981242131

A case report of complete atrioventricular canal with pulmonary infundibular stenosis and persistent left superior vena cava diagnosed by contrast two-dimensional echocardiography

DIAGNOSTIC D'UN CANAL ATRIO-VENTRICULAIRE COMPLET AVEC STENOSE INFUNDIBULAIRE PULMONAIRE ET VEIN CAVE SUPERIEURE GAUCHE PAR L'ECHOGRAPHIE BIDIMENSIONNELLE DE CONTRASTE. A PROPOS D'UN CAS OPERE
1981

...old child with complete atrioventricular canal, pulmonary infundibular stenosis and persistent left superior vena cava **draining** into the **coronary sinus** is reported. Two-dimensional echocardiography with injection of contrast in a left arm vein gave a precise and complete diagnosis of the malformations before **catheterisation** and angiography. The complete atrioventricular canal was demonstrated by apical four-chamber views. The pulmonary...

10/6,K/14 (Item 4 from file: 73)
DIALOG(R)File 73:(c) 2002 Elsevier Science B.V. All rts. reserv.
01717188 EMBASE No: 1980085741

Surgical management of the persistent left superior vena cava **draining** into the left atrium - surgical consideration for simple ligation technique of the left superior vena cava
1979

A persistent left superior vena cava **draining** into the **coronary sinus** which opened in the left atrium was found in a 6-year-old girl with ...
...vena cava to normal. If the persistent left superior vena cava is identified on preoperative **catheterization**, venography in the left superior vena cava is important in order to know the site...

10/6,K/15 (Item 1 from file: 88)
DIALOG(R)File 88:(c) 2002 The Gale Group. All rts. reserv.
02919379 SUPPLIER NUMBER: 11956688
An investigator's journey in cardiology. (In Retrospect)
Feb 19, 1992

WORD COUNT: 4188 LINE COUNT: 00337
... me, in 1945, to study the nutrition of the human heart in situ through the **collection** of **coronary sinus** blood by means of **catheterization**.

Lindbergh was interested in keeping organs alive because he wanted to help a relative who...

10/6,K/16 (Item 1 from file: 94)
DIALOG(R)File 94:(c)2002 Japan Science and Tech Corp(JST). All rts. reserv.
01895562 JICST ACCESSION NUMBER: 93A0502276 FILE SEGMENT: JICST-E
Persistent Left Superior Vena Cava., 1993
...ABSTRACT: superior vena cava was suggested by the finding of CT and

abnormal course of the **catheter** for IVH. CT showed abnormal vessel in the left anterior of the aortic arch **draining** into the **coronary sinus**. Bilateral subclavian venography revealed right and left superior vena cava, which entered the **coronary sinus**...

10/6,K/17 (Item 1 from file: 144)
DIALOG(R)File 144:(c) 2002 INIST/CNRS. All rts. reserv.
12809976 PASCAL No.: 97-0023686
Intermediate results of the extracardiac fontan procedure. Discussion
1996

Copyright (c) 1997 INIST-CNRS. All rights reserved.
... percutaneous creation of a stented fenestration from the extracardiac tunnel to the systemic atrium. Late **catheterizations** reveal unobstructed extracardiac lateral tunnel function and low pulmonary pressures (range, 11 to 13 mm...
... lines, (4) preservation of **sinus** rhythm and no arrhythmias at 2 year follow-up, (5) **drainage** of the **coronary sinus** to low pressure atrium, (6) allowance for early/late fenestrations, (7) prevention of baffle leaks
...

3/6,K/1 (Item 1 from file: 636)
DIALOG(R)File 636:(c) 2002 The Gale Group. All rts. reserv.
04675540 Supplier Number: 62404679 (USE FORMAT 7 FOR FULLTEXT)
Guiding **Catheter** Pinpoints Arrhythmia.
May, 2000
Word Count: 440

TEXT:
...an intravascular device into a patient's **coronary sinus** and particularly into a cardiac vein **draining** into the **coronary sinus**.
... destroyed along with the arrhythmogenic site to ensure that the arrhythmia does not return.
The **catheter**, developed by Cardima researchers Yvonne Randolph and Duane Dickens, and granted U.S. Patent: 6...section about one to six inches in length bent to enter a branch cardiac vein **draining** into the **coronary sinus** and a relatively stiff proximal section. An inflatable **balloon** may be placed on the distal...

3/6,K/4 (Item 4 from file: 149)
DIALOG(R)File 149:(c) 2002 The Gale Group. All rts. reserv.
01279703 SUPPLIER NUMBER: 10819413
Two cases of left superior vena cava **draining** directly to a left atrium with a normal **coronary sinus**.
1991

...ABSTRACT: normally found in the embryo, but usually disappears by birth. When it remains, it usually **drains** into the **coronary sinus**, or directly into the left atrium if the **coronary sinus** is absent. This study examined...
...the **coronary sinus** was intact. In case 1, a two-year-old child underwent diagnostic **catheterization** prior to surgery to repair heart defects. The persistent left vena cava was discovered and shown to be connected to the roof of the left atrium. A **catheter** passed through the vessel entered the left atrium. A similar finding was seen in a...

3/6,K/5 (Item 5 from file: 149)
DIALOG(R)File 149:(c) 2002 The Gale Group. All rts. reserv.
01255791 SUPPLIER NUMBER: 08927674 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Localized epicarditis mimicking cardiac tumor.

1990

WORD COUNT: 979 LINE COUNT: 00083

... inferior vena cava, right superior vena cava, and the left superior vena cava (which on **catheterization** was found to **drain** into the **coronary sinus**) were dilated.

At cardiac **catheterization**, the diastolic pressures in all four chambers were elevated and...

3/6,K/6 (Item 6 from file: 444)

DIALOG(R)File 444:(c) 2002 Mass. Med. Soc. All rts. reserv.
00102849

Case 8-1987: A 44-Month-Old Girl with Fever of Unknown Origin after Repair of the Tetralogy of Fallot (Case Records of the Massachusetts General Hospital)

1987;

TEXT

...size, with an elevated cardiac apex, decreased pulmonary blood flow, and clear lungs, and cardiac **catheterization** confirmed the diagnosis of the tetralogy of Fallot. In addition, a persistent left superior vena cava **drained** into the **coronary sinus** ; a right superior vena cava was also present. The systemic arterial oxygen saturation was 88...

3/6,K/7 (Item 7 from file: 467)

DIALOG(R)File 467:(c) 2001 Informania Ltd. All rts. reserv.
00000818

TOTAL ANOMALOUS PULMONARY VENOUS DRAINAGE

1993

A case of a Nigerian full-term infant with complete anomalous pulmonary venous **drainage** into the **coronary sinus** is described. Presentation was from birth but the cardiac defect was clinically suspected at the age of 51 hours. Diagnosis was confirmed by two-dimensional echocardiography and cardiac **catheterization** . Despite a high operative mortality associated with this condition, the infant had a remarkably smooth...

3/26,TI,K/2 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00840513

INTRALUMENAL VISUALIZATION SYSTEM WITH DEFLECTABLE MECHANISM

SYSTEME DE VISUALISATION INTRALUMINALE A MECANISME DE DEFLEXION

Publication Language: English

Fulltext Word Count: 10219

Publication Year: 2001

Fulltext Availability:

Detailed Description

Detailed Description

... those disclosed in U.S. Patent No. 6,002,956 to Schaer are typical.

Guiding **catheters** such as those disclosed in U.S. Patent Nos. 6,021,340 and 5,775...

...al. may be used to rapidly advance such devices into a patient's cardiac vein **draining** into the **coronary sinus** . A particular advantage of the **catheters** disclosed in these references is the presence of an inner lumen and distal port on the **catheter** shaft, which, in conjunction with a distal **balloon**, allows for the deployment of contrast fluid distal to the distal end of the **catheter** for visualizing the venous structure.

The following U.S. Patents discuss related devices and methods...

3/26,TI,K/3 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00743297
PRESSURE-CONTROLLED CONTINUOUS **CORONARY SINUS** OCCLUSION DEVICE AND METHODS
OF USE
DISPOSITIF A PRESSION REGULEE CONCU POUR L'OCCLUSION CONTINUE DU **SINUS**
CORONAIRE ET PROCEDE D'UTILISATION
Publication Language: English
Fulltext Word Count: 6412
Publication Year: 2000
Fulltext Availability:
Detailed Description
Detailed Description
... al.

describes PISCO apparatus that includes an inflatable
balloon disposed on the end of a **catheter**, a pump and
control circuitry. The distal end of the **balloon**
catheter is inserted percutaneously or intraoperatively
into the **coronary sinus**. The control circuitry issues a
trigger...
...occlude the **coronary sinus**. During occlusion,
blood pressure in the **coronary sinus** increases, and blood
draining into the **coronary sinus** through healthy heart
tissue is forced back into ischemic tissue.
Mohl et al. disclose that...only anchors the
distal end of **catheter** 12 in **coronary sinus** CO, but
prevents blood **draining** into the **coronary sinus** from
exiting through the **coronary** ostium into the right
atrium. Thus, blood that normally would...
...20 and the rest of the
venous vasculature to rise. This in turn forces blood
draining into **coronary sinus** CS through healthy heart
tissue

3/26,TI,K/4 (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00518558
TISSUE PENETRATING CATHETERS HAVING INTEGRAL IMAGING TRANSDUCERS AND THEIR
METHODS OF USE
CATHETERS DE PENETRATION TISSULAIRE POURVUS DE TRANSDUCTEURS D'IMAGERIE
INTEGRES, ET MODE D'UTILISATION
Publication Language: English
Fulltext Word Count: 12317
Publication Year: 1999
Fulltext Availability:
Detailed Description
Detailed Description
... through the **catheter** 191 and into the vein GCV.
As shown in Fig. 7i, the **catheter** 191 is then **removed** and a **coronary**
sinus guide **catheter** 196 is introduced over the guidewire 198 into
the
coronary venous sinus. A subselective sheath 192 and introducer 194 are

1 5 then advanced through the **coronary sinus guide catheter** 191, over the guidewire 179 and into the vein GCV proximal to the passageway PW. This **coronary sinus guide catheter** 196, subselective sheath 192 and introducer 194 may be of the type described in detail in concurrently filed United States Patent Application S.N. . @ entitled **CATHETERS , SYSTEMS AND METHODS FOR PERCUTANEOUS IN SITU ARTERIO-VEINUS BYPASS**, the entirety of which is...

3/26,TI,K/5 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00518441

CATHETERS, SYSTEMS AND METHODS FOR PERCUTANEOUS IN SITU ARTERIO-VEINUS BYPASS

CATHETERS DE CREATION DE PASSAGES, SYSTEMES ET PROCEDES POUR DERIVATION ARTERIO-VEINEUSE IN-SITU PERCUTANEE

Publication Language: English

Fulltext Word Count: 19604

Publication Year: 1999

Fulltext Availability:

Detailed Description

Claims

Detailed Description

... **Sinus Guide Catheter/ AIV**

Access.

As shown in Figure 13c-13d, the **coronary sinus guide catheter** 200 with introducer sheath 100 disposed within or through its lumen 202, is advanced over the 0.035 inch.guidewire GW, until the tip of the **coronary sinus guide catheter** 200 is past the "mouth" of the **coronary sinus**. The introducer sheath 100 is then **removed** , leaving the **coronary sinus guide**

catheter 200 in place, in the manner shown in Figure 13d.

Third Step: Introduction & Aiming of...200 is past the "mouth" of the **coronary sinus**. The

introducer sheath 100 is then **removed** , leaving the **coronary sinus guide**

catheter 200 in place, in the manner shown in Figure 14d.

Third Step: Introduction & Aiming of...

Claim

... the distal end of the

coronary sinus guide catheter is in the **coronary sinus**; and,

removing the **coronary sinus guide** introducer leaving the **coronary sinus guide**

catheter and first guidewire in place,

47 The method of Claim 45 wherein the **catheter** system...the distal end of the

coronary sinus guide catheter is in the

coronary sinus; and,

removing the **coronary sinus guide**

introducer leaving the **coronary sinus guide**

catheter and first guidewire in place.

54 The method of Claim 52 wherein the **catheter** system...

3/26, TI, K/6 (Item 6 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00453233
LEFT VENTRICULAR ACCESS LEAD FOR HEART FAILURE PACING
DERIVATION D'ACCES AU VENTRICULE GAUCHE POUR STIMULATION EN CAS DE
DEFAILLANCE CARDIAQUE
Publication Language: English
Fulltext Word Count: 7237
Publication Year: 1998
Fulltext Availability:
Detailed Description
Detailed Description
... ventricle without the increased risk of an ischemic episode.
The operator first positions a guide **catheter**, of the tear away type
known to those skilled in the art, within the **coronary sinus** (block 150).
Although the use of a guide **catheter** is not absolutely necessary, the
guide **catheter** increases the ability of the operator to properly
position the **coronary** vein lead IO within a preselected **coronary** vein.
Once the guide **catheter** has been positioned within the **coronary sinus**,
the **coronary** vein lead IO is inserted through the lumen of the guide
catheter and into a predetermined **coronary** vein under fluoroscopic
observation (see Block 152). The **coronary** vein...
...wire (if 15 present) is removed from the **coronary** vein lead (block
154). The **catheter** is then removed from the **coronary sinus** (block
156), whereby the **catheter** is torn away as the **catheter** is pulled
past the terminal pins of the **coronary** lead IO. As noted above, a guide
catheter may be used to direct a guide wire which is used to guide a
support **catheter** to a desired position within a preselected **coronary**
vein. The support **catheter** IO is then used to position the **coronary**
vein lead IO as described above.
After...

3/26, TI, K/8 (Item 8 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00357828
GUIDING **CATHETER** FOR **CORONARY SINUS**
SONDE-GUIDE DESTINEE AU **SINUS** CORONAIRE
Publication Language: English
Fulltext Word Count: 3314
Publication Year: 1996
Fulltext Availability:
Detailed Description
Claims
Detailed Description
GUIDING **CATHETER** FOR **CORONARY SINUS**
BACKGROUND OF THE INVENTION
This invention generally relates to a guiding **catheter** for the
direction of an intravascular device into a patient's **coronary sinus** and
particularly to the direction of a mapping device into a cardiac vein
draining into the **coronary sinus** for detecting electrical activity
or signals causing or involved with arrhythmia from within the cardiac
sinus
and particularly into a cardiac vein **draining** into the **coronary**
sinus.

2

SUMMARY OF THE INVENTION

The present invention is directed to a guiding **catheter** which...
...advanced and further torqued to direct its distal end into a desired branch vein which **drains** into the **coronary sinus**. Alternatively, the **catheter** can
...within the patient's **coronary sinus** or branch vein. However, in this latter instance the **catheter** shaft need not be torquable but it must have sufficient pushability to be advanced over...
...patient's **coronary sinus** with its distal extremity seated within the desired branch vein which **drains** into the **coronary sinus**, an intravascular device having sensing electrodes on the
2 5 distal extremity thereof may be advanced through the inner lumen of the guiding **catheter** into the branch vein. The intravascular device is advanced through the branch vein until the...
...at a desired location within a branch vein beyond the distal end of the guiding **catheter**. Electrical activity, such as electrical
3 0 activity causing or involved with arrhythmia, may be...

Claim

... to facilitate
entry into the patient's **coronary sinus** and subselection of a branch vein **draining** into the **coronary sinus**, and an adapter on the proximal end of the elongated shaft to provide access to the inner lumen extending within the elongated shaft;
b) advancing the guiding **catheter** through the patient's peripheral venous system into a right atrium of the patient's heart;
C) guiding the distal end of the guiding **catheter** through the **coronary sinus** ostium into the **coronary sinus** and into a branch vein which **drains** into the **coronary sinus** ;
d) advancing an intravascular device having sensing electrodes on a distal portion thereof through the inner lumen of the guiding **catheter** until the distal portion of the intravascular device having sensing electrodes thereon extends out the port in the distal end of the guiding **catheter** ; and
e) detecting electrical activity by means of the sensing electrodes on the distal portion...

3/26, TI, K/9 (Item 9 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
(c) 2002 WIPO/Univentio. All rts. reserv.
00314603

BALLOON CATHETER

CATHETER A BALLONNET

Publication Language: English
Fulltext Word Count: 7240
Publication Year: 1995
Fulltext Availability:

Detailed Description

Detailed Description

... right atrium 39.

The pressurized cardioplegic solution introduced into the **coronary sinus** 42 through the **catheter** 10 is forced to flow

backwards through the **coronary sinus** 42 into the veins which typically **drain** into the **coronary sinus** 42. Second, the **balloon** 16 engages the inside circumference of the **coronary sinus** 42 and **sinus** ostium 43 and retains the **catheter** 10 in place during the cardioplegic perfusion process.

During a surgical procedure employing heart perfusion...

3/26,TI,K/10 (Item 10 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00309374

CORONARY SINUS CATHETER INTRODUCER SYSTEM

SYSTEME D'INTRODUCTION D'UN **CATHETER** DANS LE **SINUS** CORONAIRE

Publication Language: English

Fulltext Word Count: 5581

Publication Year: 1995

Fulltext Availability:

Detailed Description

Detailed Description

... is enlarged;

Figure 3 is a detail of Figure 2 in which the **coronary sinus catheter** introducer system of the present invention places the **coronary sinus** introducer within the patient in...

...4 is a figure similar to Figure 3 in which the guide wire has been **removed** from the **coronary sinus catheter** introducer system;

Figure 5 is a figure similar to Figure 4 in which the dilator of the **coronary sinus catheter** introducer system of the present invention has been **removed**;

Figure 6 is a figure similar to Figure 5 in which the **coronary sinus catheter** introducer now resides within the **coronary sinus** of the patient;

Figure 7 is a figure similar to Figure 6 in which the **coronary sinus catheter** is now disposed within the **coronary sinus** of the patient;

Figure 8 is an elevational view of the separate elements of the **coronary sinus catheter** introducer system of the present invention;

Figure 9 is a sectional view of the assembled **coronary sinus catheter** introducer system taken along lines 8@8 of Figure 7;

Figure 10 is a detail of the **coronary sinus catheter** introducer system showing the bend in the **coronary sinus** introducer prior to the placement of...

...11 is a detail similar of Figure 9 with the dilator of the **coronary sinus catheter** introducer system of the present invention fully placed within the **coronary sinus** introducer.

DETAILED DESCRIPTION...In Figure

5 the dilator 18, which is a relatively stiff straight member, has been **removed** from the **coronary sinus** introducer 20 and the bent-section 22 has been restored to the **coronary sinus** introducer...

...the **coronary sinus** 17 as shown in Figure 6. In Figure

7 a **coronary sinus catheter** 40 has been delivered into the **coronary sinus** of the patient.
The structure of the...

3/26, TI, K/11 (Item 11 from file: 349)
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00163770

RETROGRADE VENOUS CARDIOPLEGIA **CATHETERS** AND METHODS OF USE AND MANUFACTURE
CATHETERS DE CARDIOPLEGIE VENEUSE RETROGRADE ET PROCEDES D'UTILISATION ET
DE FABRICATION

Publication Language: English
Fulltext Word Count: 13657
Publication Year: 1989
Fulltext Availability:

Detailed Description
Detailed Description

... inner chamber is greater than the fluid
pressure at the point the solution exits the **catheter** . In
this way, the self-filling **balloon** automatically fills as
cardioplegic solution flows through the infusion lumen,
When cardioplegic solution flow stops, the **balloon** empties
as the solution **drains** into the **coronary sinus** .
SUBSTITUTE= SHEET
A sensing lumen orifice 30 near the distal end of
pressure-sensing lumen...